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Resocialization of Registered Nurse Students in Selected BSN Programs: Changes in Role Strain and Nursing Role Perspective

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RESOCIALIZATION OF REGISTERED NURSE STUDENTS IN SELECTED BSN PROGRAMS: CHANGES IN ROLE STRAIN AND NURSING ROLE PERSPECTIVE

by

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VITA

The investigator, Edith L. Hogle, was born on February 17, 1933, in Pomona, Kansas. She is the daughter of Robert and Shirley (Heckman) Hogle.

She graduated in 1951 from Wichita High School East in Wichita, Kansas. In June, 1954, she received a Diploma in nursing from Wesley Hospital School of Nursing in Wichita, Kansas. She received a Bachelor of Science in Nursing Education from the University of Minnesota in August, 1962, and a Master of Science in Nursing in June, 1968, from Wayne State University.

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CHAPTER I

INTRODUCTION

Present Education of Registered Nurses

At the present time there are a diversity of educational routes that one can take to become an RN (Registered Nurse) (Linden, 1985). In Illinois, the State Department of Registration and Education is the agency that gives the authority to practice as an RN after successfully passing an examination showing minimal competence in the field of Nursing (The Illinois Nursing Act, 1980). By statute these registered nurses are considered to be professional nurses and their copy of the license stipulates this title (Segal, 1985). Each state has a comparable agency and all states administer the same examination. To be able to take this examination one must have graduated from a state approved educational program in nursing.

These educational programs in nursing are located in three educational settings: hospitals, junior colleges, and four-year colleges. Awarded upon successful completion of these programs respectively are a Diploma in Nursing, an Associate Arts Degree in Nursing (ADN), and a Baccalaureate

of Science Degree in Nursing (BSN). The length of these programs is different. The hospital-based programs are two to three years in length. The junior college programs are two years in length and the college programs are four years in length (Bartholomew, 1983; Segal, 1985).

As Reed (1984) points out these programs "...were not developed to be hierarchical or foundational, or to closely articulate. The intention was to establish programs that would allow the graduates to be complementary in the practice of nursing. Each program has its own philosophy for practice. The diploma program is dedicated to the care of patients and is centered in an acute care setting. The associate degree program prepares the individual to contribute to the provision of nursing services needed by society with both liberal and technical education. The baccalaureate program prepares nurses who are generalists "'...to provide within the health care system a comprehensive service of assessing, promoting, and maintaining the health of individuals and groups'" ("Entry Into Practice," 1985). Glick (1985) observes that "The public, by and large, remains ignorant of the different levels and degrees in nursing education and when appraised, does not know the significance attached to them."

Reed (1984) has identified "...category labels or

concept labels that reflect the nature of the educational programs [in nursing], as well as the characteristics of the various nurse groups that comprise the discipline of nursing." These characteristics relate to the purposes, roles, and arenas for practice. Many leaders in nursing agree with her identified categories. Reed describes the technical education category as referring to having, in relationship to a practical or scientific subject, special knowledge and being skillful. It is "...associated with specialty training programs and with occupational study in junior and community colleges." According to Reed, the professional education category "refers to acquiring the knowledge, conduct, and qualities of a professional person." It is "associated with senior colleges and universities."

Trends in Nursing Education and Changes Influencing Them

During the recent past the hospital schools of nursing have been markedly declining but the junior college and four-year college programs have been increasing. Another trend is the increase in the number of diploma and associate arts degree graduates returning to school to obtain a baccalaureate degree in nursing (Bartholomew, 1983;

Bardossi, 1980; "BSN Completion," 1986). The number of RNs graduating from BSN programs has risen from 2,309 in 1972 to 9,105 in 1983 (National League for Nursing Data Book, 1983, p. 59; American Nurses Association, 1983, p. 118, 148). In 1983 there were 39,884 RNs enrolled in BSN programs (American Nurses Association, 1983, p. 118, 147). This is an increase of 11.8% over 1982 (American Nurses Association, 1983, p. 147). Of these, 19,863 were enrolled in basic generic BSN programs that accepted RN students (American Nurses Association, 1983, p. 119). In Illinois in 1982, there were 1,743 RN students enrolled in BSN programs with 365 graduating (American Nurses Association, 1983, p. 151). In 1983, there were 1,901 enrolled and 443 graduating (American Nurses Association, 1983, p. 150).

In a poll done by RN magazine during 1980 (Bardossi, 1980), the answer to the question "'Are you interested in getting a BSN degree?'" was "Yes" by 57% of the 335 nurses who responded to the question. RN magazine also noted that "Not surprisingly, it's younger nurses - those with most of their career ahead of them - who show the greatest concern over getting a BSN...." In 1981 75.4% (722,861) of the RNs working in nursing had less than a BSN as their highest academic credential (American Nurses Association, 1981).

As Lenburg (1980) notes, the National League for

Nursing (the official voluntary accrediting agency for programs in nursing) has identified four basic types of programs for RNs who wish to earn a BSN. One type is a program for RNs only. They are sometimes called RN/BSN, BRN, "second step", or "upper two" programs. They usually require two years of full-time study. They are designed to build on the knowledge and skills the registered nurse acquired in the ADN or diploma nursing program.

Another type of BSN program for RNs is the advanced placement program. The RN is admitted into the basic generic BSN curriculum with advanced standing. The degree of advancement is determined by the number of college credits the RN can transfer in and her [1] performance on challenge exams for general education courses, prerequisite courses, and nursing courses specific to the program. The nursing courses the RN must take are taken with the basic generic nursing students (Lenburg, 1980).

The third type of BSN program for RNs is called the career ladder program, the "articulated" program, or the "two-plus-two" program. In this model the ADN nursing

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1. The writer realizes that 3% of the Registered Nurses are males but uses the female pronoun throughout this report to avoid the awkwardness of dual pronouns or contrived sentences to avoid the use of any pronoun ("First men students admitted," 1986)

program meshes smoothly with the BSN program. The ADN program is a building block in the BSN program. The RN with an ADN is admitted into the BSN program with advanced standing based on the college credits from the ADN program. For the RN with a diploma, her advanced standing is determined as it is for the advanced placement program as described above (Lenburg, 1980).

A fourth type of program is the credit by assessment or "external degree" program. This BSN degree is "...based entirely on assessment of learning, regardless of where you acquire it, who teaches it, or the length of time you take to get it" (Lenburg, 1980). A body of knowledge and skills are specified and examinations, both written and performance, are taken to obtain credit for this content.

No matter which type of BSN program the RN enters, the goals of the program and the characteristics of it's graduates will be the same as those set out by the National League for Nursing for all BSN programs. The criteria for accreditation are the same for all BSN programs whether the students in those programs are generic or RNs (Gortner, 1968; Leddy, 1976; Hale & Boyd, 1981; Sullivan, 1984). The characteristics of the graduate of a BSN program as developed by the Council of Baccalaureate and Higher Degree Programs of the NLN (1979, pp. 2-3) are that she "...is

able to:

1. Utilize nursing theory in making decisions on nursing practice.

2. Use nursing practice as a means of gathering data for refining and extending that practice.

3. Synthesize theoretical and empirical knowledge from the physical and behavioral sciences and humanities with nursing theory and practice.

4. Assess health status and health potential; plan, implement, and evaluate nursing care of individuals, families, and communities.

5. Improve service to the client by continually evaluating the effectiveness of nursing intervention and revising it accordingly.

6. Accept individual responsibility and accountability for the choice of nursing intervention and its outcome.

7. Evaluate research for the applicability of its findings to nursing actions.

8. Utilize leadership skills through involvement with others in meeting health needs and nursing goals.

9. Collaborate with colleagues and citizens on the interdisciplinary health team to promote the health and welfare of people.

10. Participate in identifying and effecting needed change to improve delivery within specific health care systems.

11. Participate in identifying community and societal health needs and in designing nursing roles to meet these needs."

There seem to be two major changes that have influenced these RNs to seek additional education: the "...inevitable changes in the nursing profession and [in the] health care system..."("BSN Completion," 1986). The

changes in the nursing profession were initiated in 1960 when the Committee on Current and Long Term Goals of the American Nurses' Association (the official representative organization of nursing) proposed Goal Three to the American Nurses' Association's House of Delegates:

> "To insure that, within the next 20 to 30 years the education basic to the practice of nursing on a professional level for those who then enter the field shall be secured in a program that provides the intellectual, technical, and cultural components of both a professional and liberal education. Toward this end the ANA shall promote the baccalaureate program so that in due course it becomes the basic educational foundation for professional nursing"(Christy, 1980).

In 1962, Goal Three was presented as a resolution to the ANA House of Delegates. This resolution was adopted. By way of implementation of Goal Three, the ANA Board of Directors in 1965 issued the Position Paper on Educational Preparation for Nurse Practitioners and Assistants to Nurses. "This 1965 Position Paper clearly stated that 'minimum preparation for beginning professional nursing practice at the present time should be baccalaureate degree education in nursing.'" "The Position Paper also defined 'technical nursing' and stated that 'minimum preparation for

beginning technical nursing practice at the present time should be associate degree education in nursing'" (Christy, 1980).

In 1978 the ANA House of Delegates approved what has come to be called the 1985 Resolution. This resolution stated that the minimum preparation for entry into professional nursing practice would be the baccalaureate in nursing starting in 1985. Minimum preparation for beginning technical nursing practice should be the associate degree in nursing (American Nurses' Association Commission on Nursing Education, 1979, p. 5; Christy, 1980; Griffin, 1985). Actually the delegates approved three separate resolutions. One called for two categories of nursing practice to be identified and titled. The second called for comprehensive statements of the competencies for the categories. The third required "...ANA support to increase accessibility to high-quality career mobility programs for persons seeking academic degrees in nursing" (Christy, 1980). As Christy points out, a "grandfather clause" protected those currently licensed so their legal status to practice as a registered nurse would not be altered.

In July, 1985, the ANA House of Delegates "...adopted legal titles and educational requirements for two levels of nursing practice..." (Cole, 1985). The delegates "adopted

the title 'associate nurse' for persons who practice technical nursing and said that persons entering practice should hold an associate degree in nursing. Delegates voted to retain the title 'registered nurse' for persons who practice professional nursing and said that persons entering the profession should hold a baccalaureate in nursing" (McCarty, 1985). The House of Delegates "...adopted motions urging state nurses' associations ..." to implement the legal titles and educational requirements agreed upon (Selby, 1985).

The BSN, according to ANA's time table "...is expected to be the educational credential for professional nursing in all 50 states by 1995" (McCarty, 1985). The prediction was that within the next year at least one state would adopt legislation requiring that at some future date anyone sitting for the RN licensure examination must hold a baccalaureate in nursing" (McCarty, 1985).

In 1987 the Illinois Nurses' Association will seek to amend the Illinois Nursing Act to implement the legal titles and educational requirements adopted by the ANA House of Delegates. Full implementation of the amended Act would follow eight years later in 1995 ("Illinois RNs," 1986; "15,000 RNs," 1985).

But it is North Dakota which fulfilled the ANA's

prediction by becoming the first state to implement the BSN as the entry level preparation for the professional nurse with the title of registered nurse. The North Dakota Board of Nursing sought and received approval of submitted rule changes to the North Dakota Nursing Act by the Attorney General of North Dakota. On January 16, 1986, the Board voted to adopt these rule changes governing nursing education programs. "The new rules require nursing education programs to offer a curriculum leading to the BSN for RN licensure" (Selby, 1986). Implementation will be January 1, 1987.

In the past the National League for Nursing, which is the official voluntary accrediting agency for programs in nursing, has supported all three existing programs for RNs. It and the ANA "...have taken conflicting stands [on recredentialing and retitling nurses educated in different programs]" (VanMeter, 1985).

"In 1982...the Board [of Directors of the NLN] for the first time drew a distinction between professional, vocational, and technical; the latter, it said, 'requires an associate degree or diploma in nursing'" ("NLN Switches Position," 1986).

In 1985 at the NLN meeting, a resolution which "would have backed ADN education but at the same time called for

some type of additional recognition for BSN nurses" was tabled after heated discussion. Then in November, 1985, the Board of Directors of the NLN surprisingly issued a position statement supporting two levels of nursing practice: professional and associate ("NLN Adopts Motion," 1985; "NLN Switches Position," 1986). Jacquelyn Kinder, President of NLN, in a letter to the membership dated November 6, 1985, identified the following factors as calling for more advanced knowledge and greater skill on the part of nursing and being influential in the Board's position:"...the increasing complexity of health care, the need for expert ability to manage scarce resources, and the shift of demand for care into the community...." The President of NLN pointed out that the position statement says nothing about titling but does call for "...collaboration with the American Nurses' Association to define the scope and practice of nurses within these levels" (Kinder, 1985). She described the action of the Board as a desire to come together with the ANA and the nursing community to resolve the greatest area of confusion and dissension in nursing over the past 20 years and to secure nursing's future position in the health care system by educational advancement ("NLN Adopts Motion," 1985; "NLN Switches Position," 1986). The President of NLN stressed the importance of educational mobility to attaining this goal

("NLN Adopts Motion," 1985).

Because of the persistent and progressive position the ANA has taken over the years, many RNs without a BSN, especially the graduates of diploma programs, feel not only urged but even forced to get a college degree (Wallace, 1984). They feel themselves to be "second class nursing citizens" (Schaurer, 1980), devalued by BSN program faculty (Gray, 1980, p. 18), and disenfranchised from nursing (Sargis, 1983, p. 111). They feel their status will be lowered with realization of the ANA goal. Some are angry at what they perceive as a "put-down" from ANA's hierarchy (Lee, 1979). "For the individual nurse, emotion and ambivalence surround the entry into practice issue" (Wood, 1982). The emotions felt include hostility, frustration, and fear (Harsanyi, Metzger, & Popiel, 1980).

But it is not just from the ANA's position that RNs without BSNs feel the pressure to further their education. They feel that the ANA's attitude has influenced their employer's insistence on increased educational preparation for job security, higher pay, broader employment options, and advancement in the health care system (Aisenstein, 1985; Bardossi, 1980; Kuntz, 1978; Lenburg & Johnson, 1974; Letourneau, 1980; Morandi, 1983; Reed, 1979; Sargis, 1983, p. 111; Zusy, 1986). Although the Joint Commission on

Accreditation of Hospitals (1985, pp. 129-138) does not stipulate the educational requirements for entry level management positions, most job descriptions of hospitals state that a BSN is required or strongly recommended.

The health care system is in reality shaped and changed by society, not by the managers in the system. It is society which is demanding care by professionals in the health care system. "Society both recognizes and expects a profession to be an authority in a specialized field, to serve its needs. This authority is legitimized through a superior knowledge base" (Glick, 1985). And this knowledge base for professions has traditionally been secured in the American university since 1900 (Linden, 1985; Lynaugh, 1980; Reed, 1984). As Stevens (1985) observes, "No field in the history of this country has achieved professional status outside of traditional academic structures and there is no reason to assume that nursing is so powerful or so profound as to achieve this status outside the system." And many nursing leaders believe that "The Baccalaureate degree in nursing as the minimum level of entry into professional nursing practice is the first step we must take to solidify our roles in the modern, changing health care forum..." ("Entry Into Practice," 1985).

The health care system has also changed its way of

doing business to that of "big business." Nurses who work in this system are realizing that they need skills that are taught in master's and doctoral programs to give them a fighting chance, but they can't enter those programs without a college degree. Working in the male-dominated world of health-care policy, they realize that precisely because they are members of a predominantly female field, they must be at least as well educated as others on the health care team. This realization may in part be a result of the women's liberation movement (Bartholomew, 1983). Naisbitt (1982, pp. 234-235) in his book Megatrends has noted the trend of more women than men going to college. Many of these women are over 35 years of age.

Statement of the Problem

Whether under duress or out of self-motivation, as Bardossi (1980) concludes, "Many RNs, it appears, have read the writing on the wall and discovered that it spelled BSN." The return of these RNs to school to obtain their BSN assumes that this process will resocialize them to a professional nursing role perspective (Glick, 1985). The concern of some in the nursing profession is that many of these RNs seek the BSN degree as a credential, as magic letters to put behind their names, rather than for the

substantive knowledge the degree represents (Hale & Boyd, 1981; Lewis, E. P., 1977). Some nursing educators echo Leddy's (1976) concern about the difficulty of accomplishing this resocialization or role change. She says, "It is my belief that technical education in nursing provided by diploma and associate degree nursing programs does not provide the base needed for the baccalaureate degree in nursing. Technical education in nursing provides certain knowledge and skills that are necessary for professional practice; however, a philosophical framework is learned that will largely have to be changed." Gray (1980, p. 18) also questions if "...professional resocialization does take place in even the most structured of programs." The question then, is : Do these RNs who return to school to obtain a BSN change their nursing role perspective to one that is professional and if so at what emotional cost?

Significance of the Problem

If, by returning to school to obtain the BSN, the RN is resocialized to a professional role perspective, society would benefit. If she is indeed resocialized, society's financial investment in institutions of higher education has been well spent. Society will have more access to nursing practitioners who are better able to meet their nursing

needs.

The field of nursing has been struggling to establish itself as an accepted profession. If the return of these RNs to school to earn the BSN results in a change of their role conception to that of a professional, the goal of nursing to be accepted as a profession will be closer to achievement.

As Woolley (1984) reminds us, these RN students "are risking a great deal by returning to school; the fear of failure spawns a tremendously high anxiety level." Many are making significant financial sacrifices and all feel the loss of participation in their usual roles. Even if they do not fail, but come to the end of the program without sensing that something significant has occurred to them in the way they view nursing and their role as a nurse, they will feel this period has been a waste of their time and that they have just played the "game" to get their degree (Woolley, 1984).

The educators who guide these RNs toward a professional role perspective bear the responsibility of assessing if they have met their goal. They need to understand the processes of role change and resocialization and how these processes may be manifested in these RN students. With this understanding they can better assist

the RN student through this process of role change to a successful completion. The efforts of the RN student, the goal of the profession, and the investment of society will have been satisfied.

Purpose of the Study

The purposes of this study are, for a group of technically trained Registered Nurses, who return to school to obtain the BSN, to determine

1. if they change their perspective on the role of the nurse from one that is technical to one that is professional in nature

2. if they evidence manifestations of role strain during this time period

3. if the evidenced manifestations of role strain separate out into distinct phases or stages

4. if correlations exist between the point(s) at which role perspective changes occur, from technical to professional, and the identified phases of experienced role strain (if indeed both situations are found to be present during this time period).

Rationale for the Study

This study should begin to answer the larger question of whether or not it is realistic to assume that a professional perspective of nursing can be developed by experiencing the broad base for professional nursing after being trained in a technical perspective of nursing. If definitive phases of role strain are substantiated for technically trained registered nurses returning to school to obtain the BSN, this knowledge can be used to help the instructors predict and prepare for it and to assist these students in developing healthy means of coping with the role strain which they experience.

Most of the previous observations and research on the RN returning to school to earn the BSN have been anecdotal, retrospective, non-planned analyses of an author's personal experiences, either as a student or a faculty member, in a BSN program that admitted RN students.

The present study was a planned, concurrent study of the experiences of RN students that sought to document the existence of phases of role change of the RN student from technical to professional nursing role perspective. This study documents what the RN student enters with, in the way

of professional nursing role perspective and how this changes over the course of the program. In addition, this study attempts to correlate changes in nursing role perspective with phases of role change, which has not been previously reported.

Summary

With increasing numbers of RNs returning to school to earn the BSN, two basic issues are raised. The first issue is, does this experience resocialize them to a professional nursing role perspective? Is there evidence that as a result of this educational experience these RNs are changed from a technical to a professional nursing role perspective? The second issue is, has the investment been worth it, individually, professionally, and socially? Germane to this study, is the emotional cost to the RN student of this educational experience. This study will investigate the evidences for role strain and change in nursing role perspective in technically trained Registered Nurses who return to school to obtain the BSN.

Organization of the Study Report

In Chapter One the present education of the Registered Nurse has been presented. The trends in nursing education and the factors influencing them were then identified. The statement of the problem and its significance were clarified. Finally, the purposes and rationale for the study were presented.

Chapter Two will clarify the difference between technical and professional nursing roles. Role theory will then be presented as a background for a discussion of role, socialization, resocialization, role stress, role strain, role shock, and role change as it applies to the RN student. Retrospective, non-planned analyses of the experiences of RNs who have returned to school will be presented before planned research relating to the RN student. Finally, research of the experiences of persons with analogous situations to RN students will be discussed.

In Chapter Three the specific research questions to be answered and the definition of relevant terms will be delineated. The subjects in the study will be described as well as the informed consent procedure. A description of the instruments used in the study and their validity and reliability will be presented. Then the procedure followed

for data collection will be detailed. The study design and statistical procedures used for data analyses will be described. And lastly, assumptions and strengths and limitations of the study will be discussed.

In Chapter Four the results of the data analysis in relation to each study question will be presented.

Chapter Five will discuss interpretations of the findings and implications of these interpretations, in relation to each of the study questions. Finally, recommendations will be made based on the implications of the interpretations discussed.

CHAPTER II

REVIEW OF LITERATURE

Technical vs Professional Nursing Role

RNs who return to school to earn a BSN must change from a technical nursing role perspective to a professional nursing role perspective. These differing role perspectives will be presented in a review of both descriptive and research literature.

The descriptive literature review will be presented in chronological order to facilitate the determination of any change over time in the way these two nursing role perspectives, technical and professional, have been conceptualized by nursing leaders.

Thomas (1965), in looking forward to institutions where the professional nurse would practice, was doubtful if nursing service administrators were prepared to let the professional nurse practice professionally. The characteristic of the professional role that Thomas emphasized was that of decision making, through use of analytic thought, to solve problems in patient care. In

contrast to the technical nurse, she would not need to fall back on rigid rules, regulations, and procedures. The goal of the professional nurse's decisions would be maintaining or altering the balance of the patient's care in his favor. Her perspective would be broad in contrast to the narrower one of the technical nurse. The professional nurse would have a developed intellectual potential.

Johnson (1966) believed that the difference between technical and professional nurses was the nature of their knowledge and its potential usefulness in their nursing practice. In the areas of the social sciences and biological sciences the technical nurse possesses knowledge of facts and a limited knowledge of the principles in the field, whereas the professional nurse has a reasonably good grasp of the major concepts and principles in the fields. The professional nurse is able to see relationships between facts, and between facts and concepts and theories. She also sees the usefulness of her knowledge in nursing practice more clearly than the technical nurse. From nursing courses the technical nurse has the knowledge to identify and take appropriate action in some of the common, concrete, and specific problems that patients experience. Her perspective is highly oriented to the practical. The professional nurse is able to search for theoretical explanations of the patient's response to illness, in

illness, or to stress which may lead to illness. She is able to synthesize knowledge from the social and biological sciences to explain or predict particular and unique patient behavior or modes of nursing intervention,. Her ultimate concern is with the practical nursing problems but her immediate concern is for the broader and deeper picture.

For Johnson, "the distinction between professional and technical skill derives primarily from the knowledge which equips the person to cope with particular kinds of problems." She sees skill as having three elements: "identification of the problem, decision as to the constructive course of action, and effective and efficient execution of that course of action." The technical nurse identifies problems within a limited range, decides among a few alternative courses of action, and executes a standardized course of action, whereas the professional nurse identifies complex problems with multiple variables operating in a complicated and interlocking fashion, decides among many alternatives courses of action, and executes certain courses of action. The professional nurse "...is committed to the evaluation of her own practice as a means of refining and extending her knowledge and skill." By implication, this is not a commitment of the technical nurse.

Kibrick (1968), writing in The New England Journal of Medicine, asserted that what differentiated the technical and professional nursing roles was the application of knowledge to effective practice and judgment making. In this emphasis she agreed with both Thomas and Johnson. But she made the further point that professional nursing does not build on technical nursing; they are two different careers; each program is distinct. One is a skilled occupation; the other is a learned profession.

In the specifics of differences between the technical and professional nursing role, Kibrick makes some of the same points that Thomas and Johnson did. The technical nurse makes "...decisions within a relatively small range of choices that are generally clearly outlined" whereas the professional nurse makes independent sound judgments based on knowledge of the social and biological sciences. The knowledge base of both roles is different. The technical nurse "...uses clearly defined and comparatively simple scientific principles in carrying out her nursing functions." The professional nurse is a liberally educated person with knowledge of the social and biological sciences to use in the promotion of health and assistance with healing. The technical nurse functions under the guidance of the professional nurse or physician and it is the professional nurse who identifies nursing problems,

establishes priorities, and evaluates the results of nursing-care plans. The technical nurse has a circumscribed set of activities whereas the professional nurse "...must know why, and under what conditions, to initiate nursing action." The setting for practice is more limited for the technical nurse: "...controlled settings, such as hospitals or doctors' offices." The professional nurse practices also in less controlled settings such as community health programs. The client for the technical nurse is the individual but for the professional nurse it encompasses the family and the community as well. Kibrick outlines additional facets to the professional role that the technical role does not have: co-ordinator of services that affect the patient; collaborator with health workers in the care of the patient; supervisor, teacher, and director of others who participate in nursing care.

Moore (1969) contended "...that the professional - technical distinction should be based on the activity involved": that is, the nurse's performance, what she does, and the special knowledge she has that enables her to perform in this manner. Moore did not agree with Johnson that the professional nurse brought to every activity, required by the patient, skill of a different level or of a different kind from that brought by the technician. But, she did agree with Johnson "...that professional practice is

characterized...by 'sensitivity to a broad range of cues in the problematic situation; an intellectual command of a large selection of alternative explanatory and predictive interpretations to bring to bear on the situation.'" Moore outlined what she felt characterized the performance of a professional nurse that was different from what a technical nurse could accomplish: "...the systematic collection of data about patients, the use of scientific principles to suggest methods of approach, and the testing of those methods in terms of their effects on patients." The professional nurse can accomplish this performance because of her background knowledge in the basic sciences and her intellectual ability to make generalizations from data and derive hypotheses to be tested in working with individual patients.

Berry and Drummond (1970) emphasized two areas that differentiate the technical nursing role from the professional nursing role: the depth of understanding of the patient and the ability to make responsible judgments. The technical nurse is seen as a dedicated individual, but because her knowledge base is limited to those subjects which have a direct application to nursing she is not able to have and project "...a deep understanding of the patient, not just as a physiological system, but as a person with all the doubts, fears, fantasies, and hopes that are experienced

by all human beings" which the liberal education of the professional nurse provides. The technical nurse "...possesses special skill in ministering to those who are ill or suffering" but it is left to the professional nurse "...to make responsible judgments that affect the person, not solely the patient's condition." Like Thomas and Kibrick, Berry and Drummond characterized the professional nurse as a maker of responsible judgments. Berry and Drummond were in agreement with Johnson, Kibrick, and Moore that it is also the depth and breadth of the knowledge base that differentiates the technical nursing role from the professional nursing role.

Waters, Chater, Vivier, Urrea, and Wilson (1972), after reviewing the literature for the differences between technical and professional nursing practitioners, organized the differentiating characteristics according to three areas: "...nature of the problems the practitioner solves and the characteristics of the decision-making process..., scope of practice..., and attitudes toward practice." The nursing problems that the technical nurse identifies are common, broad, recurring, concrete, and specific and usually of a physiological nature. The entire range of nursing problems, some of which are complex, abstract, and not clearly defined, are identified by the professional nurse. The technical nurse solves the problems she identifies with

a selection from standard courses of action which have predictable outcomes. The nursing actions which the professional nurse selects may be modified standardized approaches or innovative and probabilistic actions. The technical nurse exercises judgment within clearly defined limits to solve the nursing problems she identifies whereas the professional nurse, in problem-solving and decision-making, has "... a large body of knowledge which...extends beyond practical and established nursing knowledge, and includes a large selection of alternative explanations and predictions for nursing problems."

In the scope of practice area, Waters et al. noted that the technical nurse's scope is primarily limited to care of patients with identified nursing problems. These patients are under the supervision of a professional nurse or physician. She has some role in supervision and evaluation of other workers in the technical aspects of care. The scope of practice of the professional nurse goes beyond the individual patient. Her practice extends to guiding the work of others, leading and coordinating patient care, teaching other workers, collaborating with other health discipline members, and helping solve health problems of those in the community.

In the area of attitude toward practice, Waters et

al. pointed out that the technical nurse uses information that comes to her from others in the practice setting while the professional nurse has a scientific attitude and "...uses practice as a means of gathering data for refining and extending her practice." The professional nurse is self-directing and values freedom to act independently. The technical nurse may require supervision but the professional nurse requires consultation.

Hartwig (1972) felt that the professional nursing role perspective was "...the ability to examine the foundations on which one's practice is based." By this she meant "...the ability to evaluate nursing practice in the light of existing theory and new knowledge." Johnson also emphasized this perspective. Hartwig saw the main difference between the technical and professional nurse in the area of "...ability to use the problem-solving approach in all aspects of nursing care." The professional nurse is expected to identify needs, select alternative solutions to problems, improvise and initiate teaching according to the patient's particular situation, and evaluate nursing care outcomes, but this is not expected of the technical nurse. She also made the same point that Kibrick did; technical nursing is not a foundation for professional nursing practice. Hartwig felt that both the technical and professional nurse had unique abilities and that each kind

of practice synthesized knowledge in a different way; each educational program is based on differing approaches to the provision of nursing care.

Lewis (1973) felt that very few nurses really functioned as professional nurses, but those that do, operate solely out of their own knowledge, their own judgments, and their own decisions. They have a broad scope of practice along the entire health-illness spectrum. The technical nurse is prepared for the direct care of the hospitalized sick and is not individually accountable to the patient she serves but to the institution that employs her. Lewis agreed with Hartwig and Kibrick that the technical and professional nurse have a different kind of practice.

Kohnke (1973), in her review of the literature for descriptive characteristics which differentiated technical and professional nurses, classified these characteristics into three areas: knowledge base, responsibility, and role. In the area of "knowledge base," the technical nurses's knowledge base is narrow in scope and deals primarily with the technical tasks of nursing. In contrast, the professional nurse's knowledge base is broad in scope, primarily theoretical, and deals with a wide range of nursing problems. The technical nurse has a strong social consciousness and is able to be an active, participating

citizen. The professional nurse has the further ability for social leadership. The curriculum for the technical nurse is terminal. The curriculum for the professional nurse has a heavy emphasis on continuing education and a strong research orientation.

In the area of "responsibility" Kohnke (1973) found that the technical nurse recognizes problems of a technical nature and the professional nurse identifies problems of a broad nursing scope. The technical nurse plans, implements, and evaluates daily assignments but the professional nurse does the total planning on a long-term basis and implements and evaluates the nursing care plan. The technical nurse only collects and transmits data and the professional nurse makes generalizations from the collected data and tests them. The technical nurse is able to recognize and report major deviations from health and changes in a patient's condition. The professional nurse recognizes all deviations from health and changes in condition and is able to make predictions from these. A high degree of skill is developed by the technical nurse in technical tasks. Being able to do research and evaluate and utilize the research findings of others is the professional nurse's responsibility.

Kohnke (1973) listed in the ares of "role", for the technical nurse, assisting and working under the supervision

of the professional nurse. The professional nurse has the role of leadership in nursing and collaborator with other health professionals. The technical nurse is capable of understanding and utilizing the nonskilled worker but it is the professional nurse who directs the work of assistants. The technical nurse is able to participate actively as a citizen in her community and the professional nurse takes the further role of leadership in the community.

Loomis (1974) did not directly contrast the role of the technical nurse with that of the professional nurse but she did outline the role of the professional nurse. The role of the professional nurse includes the following: direct, comprehensive nursing care to patients, function as a generalist, application of scientific theory and critical inquiry to patient care problems, and leadership skills. Loomis, like Thomas, identified the active, analytic thought processes of the professional nurse in the solution of patient care problems.

Frederickson and Mayer (1977) reported on how Mary Kohnke in her doctoral dissertation of 1972 categorized the behaviors that nursing leaders felt distinguished the practice of technical and professional nurses. She used three categories: knowledge base, responsibility, and role. The professional nurse provides care based on a broader

theoretical base and is more directive and collaborative. The technical nurse provides care based on more delineated, technically oriented patterns and receives more supervision.

Epstein and Friesner (1977) saw the level of problem-solving and decision making as the major difference between the technical and professional nurse. This difference is rooted in the knowledge base of the two practitioners. The technical nurse has a narrower base of physical and psychosocial cultural knowledge on which to base nursing decisions. The professional nurse, because of her broad foundation of physical and behavioral sciences and liberal arts knowledge, has high-level problem-solving and decision-making capabilities. The technical nurse uses her capabilities to meet the usual needs of individuals who have acute or chronic secondary health care problems while the professional nurse uses her capabilities to meet the psychosocial-cultural needs, as well as the physical needs, of individuals, families, and groups. The technical nurse functions in structured settings under the direction of others; in contrast, the professional nurse functions independently in less structured settings and emphasizes health education and prevention. Thus, like Thomas, Waters et al., and Hartwig, Epstein and Friesner saw the level of problem-solving and decision-making as differentiating

criteria for the role of the technical and professional nurse.

Michelmore (1977) felt that the difference between the technical and professional nurse was how much the nurse knew, not what kind of knowledge she had; therefore, she disagreed with Kibrick and Hartwig. One would expect Michelmore to take this stance because she taught in an articulated AD/BSN program. The technical nurse has basic or simple knowledge, which is the knowledge of problems with known solutions, and the professional nurse has complex knowledge, which is knowledge of problems with relatively unknown solutions. The technical nurse uses basic nursing knowledge in planning and giving direct nursing care in supervised settings. She uses nursing measures that have a fairly predictable outcome. The professional nurse provides leadership in the delivery of direct and indirect nursing care. She uses intellectual skills in determining which nursing agent is best. Michelmore's description of the differences between the technical and professional nurse sounds very much like Johnson's, Kibrick's, and Waters et al's.

Reed's (1979) main characteristic of the professional nurse was that of an educated person: "...a lifelong commitment to learning for its own sake as well as for

professional advancement and patient care enhancement." The technical nurse has the habit of using intuition and ritual; the professional nurse uses fact and reason. The technical nursing role perspective has a single viewpoint; The professional nursing role perspective has the viewpoints of many disciplines. The technical nurse lacks an examined set of ethical convictions but the professional nurse has developed these. Reed would agree with Johnson, Kibrick, and Hartwig that technical and professional nursing are two different perspectives in quality, not quantity, because she called it a personal transformation to move from one perspective to the other.

Freed (1980), like Michelmore, saw the technical nursing role as a foundation upon which the professional nursing role could be built (p. 54). The difference for Freed was a matter of extent of knowledge base and scope of practice (p. 54), aspects that Moore, Waters et al., and Lewis had also identified. It is the extended knowledge base and scope of practice that enables the professional nurse to utilize "...'critical thinking in the solution of problems reflecting increasing complexity'" (p. 54). The professional nurse has a broader clinical responsibility than the technical nurse and her scope of practice extends into the community (p. 53). She also has the "...ability to plan, teach, initiate change, and provide leadership..."

(p. 53). Other characteristics that Freed attributes to the professional nurse, but not to the technical nurse, are self-awareness, self-actualization, and continued personal and professional growth (p. 59).

Montag (1980), out of whose vision the ADN was born, confirmed Johnson's, Kibrick's, Hartwig's, and Reed's belief that the technical nursing role was not conceived as a foundation for the professional nursing role. "She argued that the objectives, content, and teaching methods of the two types of programs were so different that the 'ladder concept of curriculum development was indefensible'..."(Bullough, 1979). The programs for the ADN "...were specified as complete in themselves, preparing for immediate employment, rather than requiring additional education." But Montag did develop the ADN program on the premise that the functions of nursing "...lie along a continuum, with professional at one end and technical at the other." Montag also reconfirmed Johnson's and Waters et al's. differentiation of the technical and professional nurse's scope of practice: the technical nurse was "...to deal with common recurring health problems."

Kramer (1981) saw the technical nursing role as composed of one function, that of the caregiver, and the professional nursing role as composed of five functions,

those of caregiver, manager, teacher/counselor, health promotor/supervisor, and health/illness screener. Kramer would agree with Johnson that, although both the technical and professional nurse perform the caregiver function, "the caregiver function of the hospital staff nurse role as conceptualized and practiced by the professional nurse is not exactly the same as that of the technical nurse." Kramer saw the function of caregiver of the technical nurse as including "...routine teaching...and predictable nursing interventions for common and recurring problems." Kramer reiterated Montag's belief that the functions of nursing "...lie along a continuum, with professional at one end and technical at the other."

Kramer also clarified the difference in focus of the technical and professional nurse. The focus of the technical nursing role, using her function of caregiver, is cure. By engaging in her five functions, the focus of the professional nursing role is to return the client to an even higher state of wellness by consistently and constantly seeing the individual and family as a whole entity.

Kramer differentiated the technical and professional nurse also on the basis of their scope of practice. The technical nurse limits her practice to the hospital but the professional nurse practices in a variety of settings. In

both nursing roles all the elements of the nursing process are carried out but the technical nurse engages in more planning and intervention and the professional nurse in more assessment and evaluation.

The difference in the characteristics of the technical and professional nurse are described by Kramer. The technical nurse is a "...warm, sensitive, caring nurse technician...who [is]...skilled and competent in the caregiver function." The professional nurse is a liberally educated person engaged in constant and continuous growth as a person; a self-actualized person, who has a holistic view of the client. Freed also characterized the professional nurse as a self-actualized person who experienced continued personal growth.

Sargis (1983) characterized the technical nursing role perspective as "...concrete in nature and dealing with the 'here and now'" (p. 113). In contrast, the professional nursing role perspective is comfortable with "...abstraction, problem-solving, and futuristic thinking" (p. 113). She further characterized the professional nurse as an independent practitioner who functions in a variety of settings with individuals and groups and is able to assume a leadership role (p. 114, 116).

Watson (1983, pp. 36-37), in her review of the

literature for descriptive characteristics which differentiated technical and professional nurses, classified these characteristics into five areas: types of nursing problems identified, problem-solving capacity, ability to asses the current nursing knowledge base, leadership abilities, and attitudes toward practice. Some of these areas are similar to the ones that Waters et al. (1972) used to organize the differentiating characteristics of the technical and professional nurse: "nature of the problems the practitioner solves and the characteristics of the decision-making process" and "attitudes toward practice." Others are similar to the ones reported by Frederickson and Mayer (1977): "knowledge base" and "responsibility."

The types of nursing problems identified by technical nurses were found by Watson to be those that were specific, concrete, frequently occurring, and usually physiological in nature. The professional nurse identified nursing problems that had a "broader range...- abstract as well as concrete, uncommon as well as common, complex as well as more specific, and psychosocial as well as physiological in nature" (p. 36).

The technical nurse has at her "...command a wide range of established interventions which can be used to solve problems." "In addition to known, effective

interventions...[the professional nurse is] able to modify and innovate ways of solving problems" (Watson, 1983, p. 36).

Watson found that the technical nurse is "expected to have at [her] command a good grasp of relevant and current nursing knowledge...(p. 36). But the professional nurse is "expected to go beyond [relevant and current nursing knowledge] by recognizing gaps in the knowledge base currently in use and appreciating the value of research in advancing nursing science" (p. 36).

The technical nurse has "...a leadership role but in general this role is restricted to the technical aspects of nursing care" (Watson, 1983, p. 36). Watson found that the professional nurse assumes "...a leadership role in nursing's collaboration with other health care disciplines" (p. 37).

In contrast to the technical nurse, Watson found that the professional nurse places "...more value in self-directed, autonomous nursing practice..."(p. 37).

Summary

After reviewing selected descriptive literature of the

past 20 years that sought to characterize the difference between the technical and professional nursing role, few changes or points of disagreement can be detected. The one major point that lacks agreement is whether or not the technical nursing role is a foundation for the professional nursing role. Even those who feel that it is not, still support career mobility by making it possible for a technically trained nurse to earn a BSN and be recognized as a professional nurse.

The differentiating characteristics of the technical and professional nursing role seem to fall into five categories, as evidenced by the review of descriptive literature: knowledge base, problem-solving/decision-making process, nursing problems identified and solved, scope of practice, and attitudes toward practice.

In the category of knowledge base, the technical nurse operated from a narrow, basic knowledge base consisting of facts and limited, simple principles from the biological and psychosocial sciences. The strength of her knowledge base is in physiological functioning of the patient. The professional nurse has a broad, liberal education with understanding of the major concepts and principles of the biological and psychosocial sciences. She has a deep understanding of the patient. She recognizes gaps in her

knowledge base and appreciated the value of research in extending nursing science.

The technical nurse, in engaging in the solving of nursing care problems and making decisions as a part of that process, selects from a few, clearly outlined, standardized, alternative courses of action. She tends to rely on intuition and ritual and is oriented to the "here and now." The professional nurse uses analytic and critical thinking in selecting among many alternatives or modifying or initiating alternatives. She is oriented to using the problem solving process in all areas of nursing care and making responsible judgments. She is futuristic in her perspective.

The nursing problems identified and solved by the technical nurse are common, concrete, specific, recurring ones with known solutions. They are usually physiological in nature. The professional nurse identifies and solves uncommon, abstract, not clearly defined nursing problems. They are psychosocial as well as physiological in nature.

The technical nurse has a narrow scope of practice. She functions in structured settings such as hospitals and doctors' offices. She functions under the supervision of the professional nurse or physician. In her caregiver role, she ministers to the sick individual. Her focus is on

cure. In carrying out the nursing process, she concentrates on planning and intervention. The professional nurse has a broad scope of practice. She function in a variety of settings: structured as well as unstructured settings, such as community health programs. She functions independently and directs, supervises, and teaches other health care workers. Her roles consist not only of caregiver but also of manager, coordinator, teacher/counselor, health promotor/supervisor, health/illness screener, collaborator, and change agent. In her roles she ministers to the individual, family, group, and community anywhere on the health-illness continuum. Her focus is on assisting with healing, promoting health, and enhancing higher states of wellness. In carrying out the nursing process, she concentrates on assessment and evaluation.

In the category of attitudes towards practice, the technical nurse expects to be directed and evaluated by others. She uses information for her practice provided by others. The professional nurse is self-directing, autonomous, and values freedom to act independently. She has a sense of self-awareness and evaluates her own practice. She evidences personal and professional development and growth, She seeks out data to use in her practice and initiates consultation with other health professionals. The professional nurse has an examined set

of ethical convictions.

The research literature review will be presented by using the five categories identified from the review of descriptive literature as differentiating the characteristics of the technical and professional nursing role.

In the knowledge base category, Archer (1976) found that "...BSN schools usually required a broader base with more depth in the liberal arts and general education" courses than the ADN and Diploma schools. She used school catalogs from the three different types of nursing programs as her source of data.

Kohnke (1973) interviewed deans of 11 ADN programs and 11 BSN programs in the Mid-Atlantic and Northeastern states about what their actual curricular practice consisted of. She then content analyzed these interviews and compared the findings with what she had found when she reviewed the nursing literature for the curricular outcomes for technical and professional education. Her findings from the review of literature were discussed under descriptive literature earlier in this chapter. She found that "what the schools taught and the faculties perceived about the technical and professional programs differed from what the literature stated." She concluded that "there is a blurring of the

curriculums of the two types of programs." But, she also commented a year after her study was completed that she now felt that nursing was on the move educationally.

Kohnke (1973) found that all the ADN deans agreed that the knowledge base of their graduates was narrow in scope and all the BSN deans agreed that for their graduates it was broad in scope. About half of the BSN deans said that the knowledge base of their graduates was not primarily theoretical but contained an equal emphasis on development of technical skills. Although the BSN deans agreed with the principle that the professional nurse should have the ability for social leadership, she found little evidence of the development of social leadership in the curriculums. Only about half of the BSN curricular patterns provided for research orientation. Not all of the deans agreed that their graduates should have the ability to do research but they all agreed that they should be able to evaluate and utilize the research of others. Half of the ADN deans did not see the program for the technical nurse as terminal. They saw the education of the technical nurse as different in amount, not kind, from that of the professional nurse. They felt that professional education was just more of the same kind as technical education; a pursuit of further technical excellence of a procedural nature.

In the problem-solving/decision-making category, Verhonick, Nichols, Glar, and McCarthy (1968) found that nurses with no degree responded with a greater number of therapeutic actions than BSN nurses but the BSN nurses responded with more supportive actions than the nurses with no degree. Verhonick et al. used filmed one to two minute scenarios that depicted patient situations and reactions commonly encountered by nurses in hospitals to gather their data. The subjects were 1,965 nurses attending national nursing conventions and professional meetings. The number of nurses with no degree was 479 and 495 had a BSN. Other subjects held a higher degree than the BSN. An open-ended question was used to ask the subjects what action they would take based on what they saw in the film.

Murry and Morris (1982) found that graduating nursing students from Diploma, ADN, and BSN programs differed significantly on nursing autonomy, patients' rights, and rejection of traditional nursing role limitations. Graduating BSN students scored significantly higher than students in either of the other two programs on nursing autonomy and patients' rights. On rejection of traditional nursing role limitations, they scored significantly higher than the graduating ADN students. Murray and Morris used the Pankratz Nursihg Questionnaire for data collection. Their subjects were 85 graduating Diploma program students,

80 graduating ADN students, and 59 graduating BSN students.

Richards (1972) found no difference in intelligence between Diploma, ADN, and BSN students. She used the IPAT test of "g" for this measure. Her subjects were graduating students in three programs in 13 different schools in three western states. There were 107 Diploma students, 134 ADN students, and 120 BSN students. The students were from three Diploma schools, five ADN schools, and four BSN schools.

Waters et al. (1972) found differences between technical and professional nursing practice in the area of problem-solving and decision-making. Staff nurses were observed in their customary work activities. An interview with the staff nurse was conducted concerning a clinical incident in which the staff nurse was involved in a nursing care decision. A second interview was conducted later to further explore problem-solving and decision-making processes. There were 24 ADN graduates and 24 BSN graduates in the study. Nursing actions of the ADN graduates had predictable outcomes. For six of the BSN graduates, their bases for practice extended beyond standardized approaches and were theoretical as well as empirical. They often deliberately made use of a group to solve identified problems.

Kohnke (1973) found that about half of the deans of the ADN programs believed that the judgment area of their graduates was as broad as that of the professional nurse. She pointed out that this was a direct contradiction to the narrow knowledge base that the deans had agreed their graduates possessed. With a narrow scope of knowledge it was impossible to have breadth of judgment. All the deans of the BSN programs agreed that their graduates had judgment broad enough in scope to deal with a wide range of nursing problems. Kohnke's study was described under the category knowledge base.

Frederickson and Mayer (1977) found no difference between ADN and BSN students' ability to do problem solving. The students were at the end of their basic academic nursing preparation. There were 27 ADN students from three programs and 28 BSN students from five programs. They did find, however, that the BSN students scored significantly higher than the ADN students on the Watson-Glaser Critical Thinking Appraisal. They concluded that the BSN student possesses greater critical thinking ability in general but she does not use the ability to solve nursing problems.

Boyle (1980) found that graduating BSN students were more discovery-oriented learners than graduating ADN

students. She used the Preferred Learning Styles and Teaching Activities tool for data collection. Her subjects were graduating ADN and BSN students in the articulated ADN/BSN program at the University of Nebraska during the years 1975-1978.

In the category of nursing problems identified and solved, Verhonick et al. (1968) found that BSN graduates made more relevant observations in a simulated nursing situation than nursing graduates with no degree. But, the BSN graduates made more irrelevant observations than those nursing graduates with no degree. On the other hand, the nursing graduates with no degree made more inappropriate observation than the BSN graduates. An open-ended question was used to ask the subjects what they observed, after viewing the film. Their study is described under the problem-solving/decision-making category.

Waters et al. (1972) found differences between technical and professional nursing practice. Their study is described under the category of problem-solving / decision-making. The problems that the ADN graduates identified were concrete, specific, and physical. The BSN graduates considered psychological and social needs of the patient.

Kohnke (1973) found that the deans of the ADN programs

felt that their graduates could recognize all nursing problems and recognize all deviations from health, not just major ones. This view of the ADN deans was in disagreement with the nursing literature. The deans of the BSN programs were in agreement with the literature in feeling that their graduates could identify problems of a broad nursing scope and recognize deviation from health and changes in the client's condition and make predictions from these. Kohnke's study was described under the category of knowledge base.

Hover (1975) found that BSN graduates were less restricted in their patient preferences, but "patients requiring technical care were more popular choices for all three groups of nurses...." The BSN graduates also had a greater preference for active patients than diploma graduates. Hover used staff nurses graduating in the last five years as her subjects. There were 54 Diploma graduates, 29 Diploma graduates with some college credits, and 20 BSN graduates. She developed her own open-ended questionnaire for data collection.

Watson (1982) found no difference between technical and professional graduates on problem identification skills. She used the Problem Identification Instrument for data collection. Her sample of 159 RNs were selected by a

modified stratified random sampling technique from five types of educational programs: Diploma, ADN, BSN, upper two RN/BSN, and second step RN/BSN.

In the category of scope of practice Waters et al. (1972) found differences between technical and professional nursing practice. Their study is described under the category of problem-solving/decision-making. Six of the BSN graduates felt responsibility for continuity of care as well as total nursing care of the patient. They also felt responsible for planning how to utilize the roles of other health care assistants. The education of those working with the nurse was also felt, by these six BSN graduates, to be their responsibility.

Richards (1972) found no difference between Diploma, ADN, or BSN graduating students in leadership potential, responsibility, emotional stability, or sociability. She used the Gordon Personal Profile as the instrument for data collection. Her study is described under the category of problem-solving/decision-making.

Kohnke (1973) found that the deans of ADN programs, in contradiction to what nursing literature stated, felt that their graduates could not only collect data but test and generalize from it. The deans also felt they could do total planning of nursing care on a long-term basis, which also

differed from the statements found in the literature. The deans of the BSN programs were in agreement with the nursing literature in feeling that their graduates could make generalization from collected data and test these generalization. They also agreed that their graduates could do total planning of nursing care on a long-term basis and implement and evaluate the plan. The deans of the ADN programs agreed that the technical nurse works under the supervision of the professional nurse, but in disagreement with nursing literature, felt that her role also included collaborating with health professionals. The BSN deans, in agreement with nursing literature, felt the professional nurse's role was not only that of a leader in the field of nursing but in the community as well. Directing the work of assistants was part of her role. In disagreement with the literature, some of the BSN deans saw the professional nurse as an assistant to the physician. Kohnke's study was described under the category of knowledge base.

Goldstein (1980) found that BSN graduating students were more self-actualizing than ADN graduating students. She used the Inner-directed Support scale of the Personal Orientation Inventory. Self-actualization has been correlated with leadership ability. These two groups showed no difference in the Time Competence scale of the Personal Orientation Inventory. On the four subscales of the Personal

Orientation Inventory that have been correlated positively with leadership, Self-actualizing Value, Spontaneity, Self-regard, and Self-acceptance, the BSN graduating students scored significantly higher than the ADN graduating students.

Hover (1975) found that as education increased, the nurse was more interested in providing teaching and supportive care. She also found that BSN graduates were "...more likely to seek promotions outside the hospital system." Hover's study is described under the category of nursing problems identified and solved.

Bullough and Sparks (1975) found that ADN graduating student tend to be cure oriented and BSN graduating students are care oriented. The questionnaire used was developed by senior BSN students with the help of Bullough and Sparks and validated for content by graduate nursing students. The questionnaire contained 11 questions which called for the nurse to make a choice between two different work roles or between two tasks within a role. The subjects for the study were 201 ADN graduating students and 192 BSN graduating students in the Los Angeles area.

Bullough (1979) found that generic ADN students tended to be cure oriented but generic BSN students were equally care/cure oriented. The subjects for this study were 643

generic ADN students and 168 generic BSN students in the Orange County/Long Beach nursing consortium which was formed to improve the articulation between the various levels of nursing education in that part of Southern California. The questionnaire previously described was further refined for this study. It is described and reproduced in Instruments for Use in Nursing Education Research by Ward and Fetler (1979, pp.383-391).

Johnston (1982) found that BSN nurses prefer the strategy of asking analytical questions in the assessment phase of the nursing process more than Diploma and ADN nurses. Diploma and ADN nurses prefer the strategy of measurement of body function in the assessment phase of the nursing process more than BSN nurses. She found that BSN nurses prefer the production of nursing diagnoses from assessment data gathered more than Diploma and ADN nurses. Diploma and ADN nurses prefer the production of information for other health team members from the assessment data gathered more than BSN nurses. She also found that BSN nurses prefer the strategy of interpreting outcomes of care in the evaluation phase of the nursing process more than Diploma and ADN nurses. Diploma and ADN nurses prefer the strategy of reporting outcomes of care in the evaluation phase of the nursing process more than BSN nurses. She found no differences between the three groups in the

preference for strategies of identification of alternative sources of data and direct questioning in the assessment phase of the nursing process, initiating nursing orders and planning for activities of daily living in the planning phase of the nursing process, or testing plans of care and implementing standard plans of care in the intervention phase of the nursing process. A questionnaire developed by Johnston based on the Rines model of nursing process strategies was used to collect the data. The subjects were 29 BSN nurses, five Diploma nurses, and eight ADN nurses from seven units of the same hospital.

In the category of attitudes toward practice Waters et al. (1972) found differences between technical and professional nursing practice. Six of the BSN graduates were self-directed and willing to take a chance. Their study is described under the category of problem-solving / decision-making.

Hover (1975) found that "most nurses, regardless of their education, reacted negatively to being supervised." Hover's study is described under the category of nursing problems identified and solved.

Boyle (1980) found that graduating BSN students had higher scores on Attitude of Criticism and Impatience with Rate of Social Change than graduating ADN students. No

differences were found between the two groups on Consumer Control, Indifference to Credentialism, a Superordinate Purpose, or Compassion for Needs of the Client/Public. She used the Health Care Professional Attitude Inventory for data collection. This tool is described and reproduced in Instruments for Use in Nursing Education Research by Ward and Fetler (1979, pp. 177-182). Boyle's study is described under the category of problem-solving/decision-making.

Ketefian (1981) found that BSN prepared nurses had higher levels of moral reasoning and more adequate moral behavior than Diploma or ADN prepared nurses. BSN nurses had higher scores on the scale that reflected their knowledge of, and upholding of, values as expressed by the Code for Nurses, as well as their moral reasoning process. But no differences were found on the scale that assessed how likely nursing actions in accord with the Code for Nurses would be implemented in nursing practice. The subjects for this study were 43 practicing BSN RNs and 36 practicing Diploma and ADN RNs, in three major medical centers. The tool used to gather the data was the Judgment About Nursing Decisions constructed by Ketefian.

Richards (1972) found that graduating BSN students had a more professional orientation toward their ideal of nursing practice than Diploma or ADN graduating students.

"The diploma and associate degree students saw their ideal of nursing practice as being slightly more traditional than the real situation, while baccalaureate students saw their ideal practice of nursing as much more professional than the real situation." Richards used the Professionalization Scales developed by Sister Madeleine Clemence Vaillot in 1962 with slight revision by herself. Richards' study is described under the problem-solving/decision-making category.

Archer (1976) found that on a test of degree of professionalization "there were no consistent patterns or overall mean group differences in traditional-professional orientation [for Diploma, ADN, and BSN students] although significant mean group differences were found in five of the six dimensions used to assess this measure." Archer used the same tool as Richards had, but without revision, for data collection. Sister Madeleine Clemence Vaillot's Professionalization Scales are described and reproduced in Instruments for Use in Nursing Education Research by Ward and Fetler (1979, pp. 592-599). Archer used students in their terminal course from the three different programs as her subjects for this study.

Watson (1982) found that BSN graduates held stronger attitudes toward professionalism than did Diploma and ADN

graduates. She used the Benner Real Proficiency Scale for data collection. Her sample was described under the area nursing problems identified and solved.

Corwin (1961a) found that "students trained in degree programs hold less bureaucratic role conceptions than diploma students." He also found that degree personnel increasingly subscribe to professional role conception after graduation...." His subjects were 169 staff nurses in seven hospitals in an upper midwestern metropolitan area and 67 junior and senior students nurses in both Diploma and BSN programs in an upper midwestern metropolitan area. The nursing programs were in four different schools. The tool used for data collection was the Nursing Role Conception Scale developed by Corwin. It is described and reproduced in Instruments for Use in Nursing Education Research by Ward and Fetler (1979, pp. 413-424).

Corwin (1961b), in another study, found that the "conceptual organization of diploma and degree [nursing] students does not differ...." There was no difference between the percentage of Diploma and BSN students who held high professional-high bureaucratic, high bureaucratic-low professional, low bureaucratic-high professional, and low bureaucratic-low professional combined professional and bureaucratic conceptions of role. He also noted a decline

in the professional role conception of the Diploma graduate after graduation: however, she maintained her bureaucratic role conception as it had been while a student. The BSN graduate maintained her professional role conception at the level it had been while in school and increased her bureaucratic role conception. His subjects were 201 staff nurses in seven hospitals and 71 Diploma and BSN students, who were juniors or seniors, from four schools of nursing in a midwestern metropolis. The tool used to collect the data was Corwin's Nursing Role Conception Scale.

Corwin and Taves (1962) found that BSN students had a lower mean bureaucratic role conception than Diploma students but there was no difference between the type of student in the mean professional and service role conceptions. Staff nurses did not differ in their mean bureaucratic, professional, and service role conceptions in relation to their educational program (Diploma or BSN program). It was also found that Diploma nursing students had greater role certainty than BSN students. "Role certainty is inferred from the proportion of responses to all questionnaire items at the extremes...." Diploma nursing students and BSN students underwent the role conception transformation from student to staff nurse in a different pattern. There was no difference between the Diploma student nurse and Diploma staff nurse in

bureaucratic role conception but the BSN student had a lower bureaucratic role conception than the BSN staff nurse. On the other hand, the Diploma student nurse had a higher professional role conception than the Diploma staff nurse but the BSN student and BSN staff nurse showed no difference in professional role conception. Both types of nursing students had higher service role conceptions than both types of staff nurses. The sample for the study was 124 staff nurses from seven midwest metropolitan area hospitals, and 71 junior and 71 senior nursing students from four schools of nursing of different sizes and affiliation. The tool used to collect the data was Corwin's Nursing Role Conception Scale.

Davis in 1971 (Ward & Fetler, 1979, p. 415) found that graduating ADN students had a higher bureaucratic role conception than graduating BSN students. She used Corwin's Nursing Role Conception Scale as the tool for data collection. Her subjects were ADN and BSN students just prior to graduation in seven ADN and seven BSN programs in upstate New York.

Pieta (1976) found that for three role conceptions of nursing (bureaucratic, professional, and service), the ideal conceptions of graduating nursing students in ADN and BSN programs were similar. There were 418 female nursing

students in New York as subjects. The tool she used to gather the data was adapted from Corwin's Role Conception Scales and is described and reproduced in Instruments for Use in Nursing Education Research by Ward and Fetler (1979, pp. 425-439).

Notter and Robey (1979) found that Diploma and ADN nurses had a different approach to nursing practice than BSN nurses (p.126). At graduation a greater percentage of BSN graduates had a high professional role conception than Diploma or ADN graduates (p. 261). A greater percentage of BSN graduates also had a low bureaucratic role conception than Diploma or ADN graduates (p.261). A modification of Corwin's Nursing Role Conception Scale was used for data collection.

Hover (1975), in a review of the research literature concerned with differentiating the Diploma graduate from the BSN graduate, found that senior BSN students scored higher than senior Diploma students "...in professionalism, perceived ability to communicate, and autonomous aspects of leadership." However, the senior BSN students scored lower than the senior Diploma students in the value placed on research. There was no difference between the two groups in "...personality characteristics, self-esteem, the consideration aspects of leadership, interests, aptitude,

achievement, and intelligence."

Watson (1983, pp. 37-51), summarized under two areas her extensive review of the research literature concerned with differentiating between the technical and professional nurse: cognitive performance and attitudes toward practice. She concluded that within the area of cognitive performance there was support for "....the contention that differently educated nurses focus on different problems and that higher education yields more independent nursing actions" (p. 51). But she also observed that conflicting findings were revealed. However, the overall conclusion was that the researchers "...continued to support the premise that a difference exists in the performance among graduates of different types of educational programs" (p. 51).

Under the area of attitudes toward practice, Watson (1983) concluded that the studies "...suggested that nurses perceive their skills and competencies differently" (p. 51). The BSN graduates, in contrast to other nurses, tended to identify themselves as stronger in communication skills (p. 51). She found few studies that documented differences among graduates of different types of programs in the following areas: "...personality traits, intellectual qualities, professional attitudes, or the image of nursing held" (p. 52). But, BSN graduates "...tended to score higher than

other nurses on measures of professionalism" (p. 52).

Watson's (1983, p. 52) overall conclusion was that the research evidence was inconclusive as to what the differentiating characteristics were between the technical and professional nurse. She pointed out that the research was "...limited in generalizability due to methodological weakness" (p. 53). Problems included small sample size, lack of control of extraneous variables, use of instruments that had questionable reliability and validity, unidentified or lack of control for bias of respondents, low response rate of subjects, and lack of consistent statistical analysis (p. 53).

Summary

Admittedly, this review of research on the differentiating characteristics of the technical and professional nurse, is selective and lacking exhaustiveness. But, except for the area of role conception, one is struck by the diversity of areas studied and the lack of replication or organized extension of these isolated studies.

It is difficult to compare the studies, even when the topics are somewhat related, because of the diversity in

samples and variety of measurement tools and methods. There are conflicting findings in some comparable areas but in general there are more areas of differences than likenesses found between the technical and professional nurse. The difficulty is how to categorize the differences. There seems to emerge as a distinguishing feature of the professional nurse, as contrasted to the technical nurse, a breadth of perspective both cognitively and in practice.

The research literature is not as clear cut and organized as the descriptive literature is in differentiating the role perspective of the technical and professional nurse. As Kohnke (1973) observed, there is some blurring of the distinctions between the roles as portrayed by the descriptive literature. But since, as Watson (1983) concluded, the research evidence is inconclusive, the persistent historical differentiation of the technical and professional nursing role perspective must be given credence.

Theoretical Framework

Role theory is the theoretical basis for the conceptualization of attaining the desired goal of the educational process for the technically trained RN - a professional perspective of the nursing role. The concepts of interest within role theory for this study are: role, socialization, resocialization, role stress, role ambiguity, role conflict, role incongruity, role strain, role shock, and role change.

Role theory predicts how actors will perform in a given role or under what circumstances certain types of behavior can be expected. It represents a variety of hypothetical formulations and a collection of concepts (Conway, 1978, p. 17). However, Shaw and Costanzo (1970, p. 344) do not view role theory as predictive. They feel it is largely descriptive and classificatory. "Role theory is a body of knowledge and principles that at one and the same time constitutes an orientation, a group of theories, loosely linked networks of hypotheses, isolated constructs about human functioning in a social context, and a language system which pervades nearly every social scientist's vocabulary" (Shaw & Costanzo, 1970, p. 326).

Role: These RNs who return to school to earn the BSN

have been functioning in and perceive themselves as fulfilling the nurse role. The concept of role is described in slightly different ways. Shaw and Costanzo (1970, p. 326) describe it as "the functions a person performs when occupying a particular characterization (position) within a particular social context." King (1981, p. 147) brings in the aspect of expected behaviors by a second person: "A set of behaviors expected of persons occupying a position in a social system; rules that define rights and obligations in a position; a relationship with one or more individuals interacting in specific situations for a purpose." Hardy (1978, p. 75) concurs that the concept, role, is used to refer to both the expected and actual behaviors associated with a position. "Role expectations are position-specific norms that identify the attitudes, behaviors, and cognitions that are required and anticipated for a role occupant" (p. 76). "Role performance (role behavior or role enactment) is differentiated behavior or action relevant to a specific position" (p. 76). The five terms that Biddle and Thomas cite as role-related behaviors are role expectations and norms, role performance, and role evaluation and sanction (Shaw & Costanzo, 1970, pp. 328-333). Conway (1974) includes the aspect of attribution in relation to roles: "A set of behaviors attributed to or expected of an individual who occupies a particular position within the structure of a society." Evans (1971, p. 57) notes that roles may be

ascribed, assumed, adopted, or achieved. Gullahorn (1956) includes the aspect of the role performer's perspective. Role "...includes the way he defines himself and the behavior appropriate to his position...." Shaw and Costanzo (1970, p. 334) call a "covertly held description of a role" a role conception. Corwin and Taves (1962) describe role conception as the "images of the rights and obligations which a person perceives to be associated with his position...."

There are two major perspectives in the behavioral sciences from which the concepts of role and role performance have been studied (Conway, 1978, p. 18). The functionalist perspective assumes that roles are more or less fixed positions within society. They have attached to them certain expectations and demands. The expectations and demands of these fixed positions are enforced by either negative or positive sanctions. The social actions of an individual are viewed as learned responses, during socialization, which are reinforced by significant others in their approval or disapproval of the individual's behavior. Roles are viewed as objective, real entities which are "...structurally determined by the social forces dominant in a given society at any point in time" (p. 19). Roles change as "...the institutions of society evolve" (p. 20). King (1981, p. 89) points out that "the functionalist perspective relates use of the term role in formal

organizations...."

The symbolic interactionist perspective interprets human behavior or social action as a response on the part of the individual to the symbolic acts of others. The symbolic acts are such things as gestures and speech. The behavior or response of the individual is really a reflection of his interpretation of the symbolic act of the other. Society is seen as a framework within which individuals make their roles explicit. Society is used by the individual and does not determine his social behavior. "The individual engages in interactions with others and selects certain cues for action which for him, have more relevance than others" (Conway, 1978, p. 18). King (1981, p. 89) points out that "the interactionist view of role is basic to understanding individuals in roles in organizations." The symbolic interactionist's perspective has taken precedence over the functionalist's perspective in the approach to the study and explanation of human behavior (Conway, 1978, p. 22).

Socialization: These RNs were socialized into the role of nurse in their basic nursing Diploma or ADN program. Socialization is a process, the purpose of which is, to enable individuals to participate as effective members of groups and society by acquiring the necessary attitudes, emotions, cognitions, values, motivations, social patterns, knowledge, skills, and dispositions (Lum, 1978, p. 142;

Hardy, 1978, p. 79). It is the process of learning a new role and adapting to it. It involves the formation of self-identity and the process of internalization of a set of role values and beliefs. The socialized individual is expected to display appropriate behaviors which are a consequence of these internalized values and beliefs (Hinshaw, 1977, p. 2). King (1981, p. 94) defines socialization as "...a process whereby a person learns values, expected behaviors, rewards, and sanctions so that he can occupy a role in an organization." "The socialization process involves taking a heterogeneous group of students and changing them into a more homogeneous group with respect to the knowledge, values, attitudes, behaviors, and skills that they will have following socialization (Lum, 1978, p. 148).

Reference groups play an important role in the socialization process. A person's reference group is a group that he is a member of or a group in which he desires to become a member (Shaw & Costanzo, 1970, p. 333). The perspectives of one's reference groups "...constitute the frame of reference for the individual" (Lum, 1978, p. 137). He uses it to help him select a behavior from a set of alternatives or make a judgment about a problematic issue (Lum, 1978, p. 138). A reference group may be either positive (the person wants to be like the group) or negative (the person doesn't want to be like the group) (Lum, 1978,

p. 139). Normative reference groups provide the socializee with a "...set of norms and values and a standard for the proper level of performance in a given role" (Lum, 1978, p. 142). Role model reference groups provide the socializee with "...assistance on how the role is to be performed" (Lum, 1978, p. 142). The audience reference group "...with its stated or imputed values...encourages and motivates an individual to exert himself to bring his performance to an achievement level in the socialization process" (Lum, 1978, p. 142).

Lum (1978, p. 143) identifies factors that either interfere with or facilitate the socialization process: "...clarity and consensus with which roles and positions are perceived by occupants, aspirants, and counter-position occupants"; "...degree of compatibility of expectations within role sectors and within role sets"; "...learning that occurs before entry to a position"; individual differences in teachers in "...their capacity and their efforts to manage the socialization process"; capacity of the socializer "...to control the sources and extent of prior knowledge the learner acquires about the profession he is to enter"; and the admission process policies and procedures for the socializee.

Hurley (1978, p.33) notes that there is no single theory of socialization. "The theories and research of the

various traditions treat different aspects of the process at different levels of analysis, focusing upon various issues pertinent to their theoretical perspective and methodology." But, increasingly, socialization has come to be viewed as an interactional and reciprocal process in which the socializee and socializer are mutually influenced" (Hurley, 1978, p. 31). Hurley (1978, p. 36) sees the content of socialization being acquired through interactional and learning processes, simultaneously.

Hinshaw (1977, pp. 2-4) outlines Ida Simpson's general model of socialization. Socialization is seen as progressing through three phases. The first phase is the transition of the socializee's anticipated role expectations to the role expectations of the socializing group. In this phase the socializee chooses to learn the new role expectations of the socializing group. In the second phase, the socializee chooses a role model from among the socializing group who models the values and behaviors of the new role. It is during this phase that the socializee becomes "...able to label or articulate that these role expectations are not what he had anticipated." It is at this point of being confronted with two sets of expectations and the conflict that is generated, that the socializee experiences strong emotional reactions. The successful resolution of this conflict depends on the presence of role models who can demonstrate, by their behavior, how to

integrate these conflicting systems of standards and values. During the third and final phase of socialization, the values and expected behavior of the new role are internalized. There are degrees of internalization which depend on how the socializee resolved the conflict of incongruencies in role expectations. Simpson used case material from a study of 95 baccalaureate nursing students to illustrate her general hypothesis about the process of socialization into a professional role. Her original data were gathered in 1956 (Simpson, 1967). This general model of socialization was also applied by Simpson to the process of resocialization, which will be discussed shortly.

The degree of internalization during the third phase of the process of socialization can be viewed in the light of Kelman's (1961; Hinshaw, 1977, p. 4) model of processes of social influence or levels of forming new values. The three levels are compliance, identification, and internalization. At the level of compliance the socializee behaves the way the socializing group desires because he wants to attain positive responses from it or avoid negative responses from it. He has not accepted the values or expectations of the socializing group as his own private beliefs. The socializee will be expected to perform the behaviors only when one of the socializing group is present or likely to gain knowledge of the behavior. The behavior "...adopted through compliance will be abandoned if it is no

longer perceived as the best path toward the attainment of social rewards" (Kelman, 1961).

At the level of identification, the socializee selectively accepts certain behaviors, but not the values underlying them, because he would like to be perceived this way. The behaviors are acceptable to him but the intrinsic values on which they are based are not accepted as his own. The performance of the behavior gives the socializee a satisfying self-defining relationship to a person in the socializing group or to the socializing group. He desires the relationship because he derives from it part of his self-image. The behavior will be performed without the presence of the socializing group but the socializee must be acting in the role of a relationship to the socializing group. The behavior adopted through identification "...will be abandoned if it is no longer perceived as the best path toward the maintenance or establishment of satisfying self-defining relationships" (Kelman, 1961).

Internalization, the third level of forming new values, exists when the socializee accepts the values of the new role because he believes in them and they have become a part of his own value system. The content of the new behavior is intrinsically rewarding. The most important characteristic of the person representing the socializing group is his credibility in relation to the content of the

behavior. The values and behavior adopted through internalization become integrated with the socializee's existing value system. The behavior will be performed if the values underlying it are relevant to the situation at hand. The behavior adopted through internalization "...will be abandoned if it is no longer perceived as the best path toward the maximization of the individual's values" (Kelman, 1961).

Kelman (1961) points out that the three processes of social influence are not mutually exclusive. The central feature of a socializee's behavior is determined by the predominance of a particular process.

Resocialization: After their initial socialization into the nurse role during their basic nursing programs, these RNs returning to school, experienced resocialization to the nurse role in a work setting. And now, as they return to school to earn the BSN, the nursing faculty seeks to resocialize them again to the nurse role, but now, it is to the professional nursing role perspective. Sams (1977, p. 40) points out that these RN students also require resocialization into the student role. Hiraki and Parlocha concur with Sams' assessment (1983, pp. 62-63). "Resocialization is the process of relearning or change - modification of the original process" (Malasanos, 1977, p. 21). Hinshaw (1977, p. 2) defines resocialization as "a

process in which new roles or sets of expectations are learned; it occurs with entry into each new position or assignment in a social system, such as in a service profession." Thus, it is "...a process strand that occurs and recurs through an entire career" (p. 8).

Hinshaw (1977, pp. 9-13) lists seven factors that influence the socialization/resocialization processes: (1) Formality of initial socialization setting (p. 10) - "The greater the separation of the initial educational program from the organization 'work-a-day' reality, the less the ability of new graduates to carry over or generalize the knowledge and skills learned in the socialization setting." (2) Professional orientation of the work setting (p. 11). (3) Role set diversity (p. 11) - The more roles a person enacts the more likely he is to experience intrarole conflicts since these other role partners are more concerned with their own goals, norms, and values than they are with his, in his role. (4) Legitimation of parent profession (p. 12) - Not every one in the work setting sees the role of the nurse as the nurses themselves do. (5) Existence of role models (p. 12) - They are needed for forming new values and opinions. (6) Dominant sex makeup of profession (p. 12) - It influences "the way in which the professional role is defined and enacted, the degree of career commitment given to the professional role, and the manner in which major role senders interact with nurses" (p. 12). (7) Ethnicity of

person being socialized (p. 13) - The integration of cultural value systems with professional value systems will be unique for each culture.

Resocialization to the nurse role in a work setting requires the first time occupant of the nurse role to operationalize professional values in a bureaucratic setting and integrate role expectations of the work setting into her behavior and values. This situation has been termed the "professional-bureaucrat conflict" (Hinshaw, 1977, p. 6). Resolution of this conflict requires "...an integration or adaptation of the two value systems, professional and bureaucratic" (Hinshaw, 1977, p. 7). Hinshaw (1977, pp. 7-8) outlines the postgraduate resocialization model that Marlene Kramer (1974) has developed through her work with new nurse graduates. There are four stages in Kramer's model. During stage one, skill and routine mastery, the new graduate focuses on developing her ability to perform procedures and techniques in a competent and efficient manner. Both systems, professional and bureaucratic, will give her positive feedback for this activity.

In stage two, social integration, the concern of the new graduate is to become one of the group and get along with her co-workers. She learns what it's really like "backstage" and how to behave and act as the others do. At this stage she must make a choice between three options open

to her: act out the backstage behaviors, continue with skill development, or start to put into action the knowledge and perspective she gained in her initial socialization to the role of nurse.

During stage three, moral outrage, the incongruencies between the way she was taught in school and the way she in reality finds the work situation becomes acknowledged. This stage signifies that she had internalized the values of her initial socialization to the nurse role (Hardy, 1978, p. 75). She is frustrated and angry and feels betrayed by both her education and her work situation. She feels she wasn't adequately prepared for the "real world" and the "real world" won't let her use her preparation.

Stage four, conflict resolution, the way the graduate resolves the conflict between these two value systems, can be classified into four types. The first type of resolution, capitulation of behaviors, involves bowing to the pressure so behavior changes, but at the same time retaining one's original values. Those choosing this route eventually leave the service setting and return to school or leave nursing completely. The second type of resolution, capitulation of values, involves changing one's values and embracing those of the bureaucratic system. This type of resolution has been termed "going native." The third type of resolution, capitulation of both values and behaviors,

involves conforming just enough to the behaviors and values desired by the bureaucratic system to maintain one's working position. The fourth type of resolution, biculturalism, is the most successful and healthiest. Biculturalism is the ability to integrate the professional and bureaucratic value systems. The new graduate is "able to identify and utilize the values and behaviors of both the professional and bureaucratic work systems in a politically astute manner."

For the RN who returns to school to earn the BSN, it is now the professional/educational value system which is involved in her resocialization. Hinshaw (1977, p. 8) points out that "educational institutions witness the resocialization process when RNs with diplomas return to acquire degrees...." It cannot be assumed that she desires this resocialization or is even aware of its goal. Some have attempted to apply Kramer's model, in reverse, to the experience of the RN returning to school (Higgins & Wolfarth, 1981). But, resocialization of the RN student to a professional nursing role perspective is a deliberate change process directed by the nursing faculty. Schein's (1972, pp. 75-76) model of planned change can be utilized to conceptualize this experience of resocialization.

Schein (1972, p. 75) explains that "planned change involves the learning of new concepts and ideas, new attitudes and values, and new patterns of behavior and

skills." He points out that those to whom the planned change is directed "...already have ways of thinking, feeling, and acting to which they are committed and which makes sense to them." They are "...committed to their present ways of operating and will, therefore, resist learning something new." They do not recognize their own need to change (Schein, 1972, p. 85). Schein notes that "...the essence of a planned change process is the unlearning of present ways of doing things." It is the unlearning process that makes planned change difficult. Epstein (1976, p. 1) observes that change "...poses a crisis in self-esteem." It may precipitate a partial identity crisis (Epstein, 1976, p. 3).

Schein's (1972, p. 75-79) model of planned change has three stages. Stage one is called unfreezing. It is here that the motivation to change is created. This is brought about by three mechanisms. In the first mechanism, the person's present beliefs, attitudes, values, or behavior patterns are not confirmed or are disconfirmed by the initiator of change. Epstein (1976, p. 9, 11) points out that these external demands for change may bring out the interpersonal emotions of anxiety, rebelliousness, hostility, and anger in the person who is the object of change. With the second mechanism, guilt and anxiety are induced in the person by comparison of the actual status with the ideal status. In the third mechanism, a situation

of psychological safety is then created for the person by the removal of barriers to change or the reduction of threats to change. He must "...feel it is safe to give up the old responses and learn something new." If he does not feel safe, he will increase his defensiveness in response to the pressure put on him to change. He may be resisting because he cannot see how to get from where he is to where the change wants to take him. Epstein (1976, p. 3) notes that the resistance may be in response to the implied evaluation of his previous behavior and attitudes as being somehow wrong or inadequate. His resistance is on an emotional level and he utilizes rationalizations as resistance. Schein (1972, p. 85) suggests using force - field analysis to identify the significant restraining forces. The effect of these can then be the target of one's efforts to reduce them. In the category of barriers to change that must be removed, Schein (1972, p. 97) identifies "the structural rigidity of early career paths and occupational socialization practices." If the person does not undergo unfreezing he will not be able to pay attention to the new information that is presented.

The second stage of Schein's model is changing. The person, on the basis of new information obtained and cognitive redefinition, develops new beliefs, attitudes, values, and behavior patterns. Changing is brought about by "identification with a particular source of information and

redefinition through perceiving things as the source perceives them." Redefinition may also be brought about through new integration of multiple sources of information. The new integration must fit the person's unique situation. This method will take longer but the new integration will be readily refrozen.

Stage three, refreezing, is "stabilizing and integrating new beliefs, attitudes, values, and behavior patterns into the rest of the system." This stage is accomplished by the person integrating the new responses into his total personality and culture. As the person's new responses are reconfirmed by significant others, he integrates them into ongoing significant relationships and into his total social system. Strauss (1962, p. 66) would term this stage "transformation." He notes that "the transformation of perception is irreversible; once having changed, there is no going back." "One can look back, but he can evaluate only from his new status." In Kelman's (1961) terms this stage would correspond to his third level of forming new values, internalization. Refreezing is not a permanent stage. The responses of this stage can become unfrozen as the prior responses were.

Role Stress: Schein's first stage of planned change, unfreezing, will create role stress for the person who is the target of planned change. Role stress "is located in

the social structure; it is primarily external to the individual (Hardy, 1978, p. 73). Hardy (1978, p. 92) feels that the person's deficit of resources may also contribute to creating role stress. "In role stress, role obligations are vague, irritating, difficult, conflicting, or impossible to meet" (Hardy, 1978, p. 76). The following are types of role stress: role ambiguity, role conflict, role incongruity, role overload, role incompetence, and role overqualification (Hardy, 1987, p. 81).

Role stress is the external force that is used in Schein's first stage to unfreeze the person's present state of commitment to ways of thinking, feeling, and acting. Goode (1960) points out that the intensity of the role stress created by the person initiating the change is inversely proportional to the desire of the object of change to conform to the new behavior that the change agent desires. The person initiating the change is conscious that he is "training" the object of change if that person's commitment to the new role is weak. The use by the nursing faculty of lack of confirmation or disconfirmation of the RN student's present technical approach and perspective towards nursing practice, and confronting the RN student with the comparison of the actual status with the ideal status of her nursing practice may result in role ambiguity, role conflict, or role incongruity for these RN students who have returned to school to earn the BSN.

Role ambiguity is an unclearness, vagueness, or poor definition of norms and expectations of a role (Hardy, 1978, p. 81). The mechanisms of lack of confirmation and disconfirmation may leave the person unclear about what role behavior is expected of him. His role performance may become idiosyncratic as a result.

Role conflict is "a condition in which existing role expectations are contradictory or mutually exclusive" (Hardy, 1978, p. 82). The role expectations are clear to the person but he sees them as competing. He faces the threat of possible sanctions if he fails to fulfill either demand, yet he finds it impossible to comply fully with opposing obligations (Gullahorn, 1956). This situation is a type of polarized dissensus and results in intra-role conflict (Shaw & Costanzo, 1970, p. 339). The mechanism of comparing the actual status of a role with the ideal status of the role will set forth clear role expectations but they may be seen as competing role expectations by the person. "If a person...feels more strongly committed to one of two competing roles, then role conflict will increase in intensity as reference-group pressures build up in favor of the other role" (Gullahorn, 1956).

Role incongruity is present when the person's "...role expectations for his role performance run counter to his self-perception, disposition, attitudes, and values" (Hardy,

1978, p. 82). The role expectations involved in the change process may involve significant modifications in the person's attitudes and values. The ideal status that is compared to the present status may threaten the basis for his self-identity and self-esteem.

Baj (1983, pp. 99-102) identifies another possible source of role incongruity for the RN student. She suggests that the nursing faculty uses teaching methods appropriate for the novice performer that may not be appropriate for adult learners who are at a higher level of performance. The faculty may be demanding that the RN student use thinking processes for decision making that are at a lower level than she presently uses in practice and this may cause role incongruity for the RN student. Baj cites the Dreyfus Model that describes the stages through which adult learners acquire specific skills. This model postulates that "...in the acquisition and eventual mastery of a skill, the learner passes through five levels of development": novice, advanced beginner, competent, proficient, and expert (p. 99). Each level reflects a change in mental capacities (from component recognition to salience recognition to whole situation recognition to decision) dependent on the learner's previous experience. Each level of performance could be viewed as a learning role. To be asked to perform in a learning role other than the one in which she presently functions and which she values and from which she gains her self-esteem,

could result in role incongruity or role stress for the RN student.

Role Strain: Role strain results from role stress, a problematic social condition with demands or external pressure, which acts as a precursor of role strain (Hardy, 1978, pp. 77, 93). In contrast to role stress, role strain is a subjective internal response. It is the "felt difficulty in fulfilling role obligations..."(Hardy, 1978, p. 92). Role strain is a "subjective state of distress experienced by a role occupant when exposed to role stress" (Hardy, 1978, p. 76). The distress is felt as frustration, tension, anxiety, apathy, or futility (Hardy, 1978, pp. 73, 92). Hardy (1978, pp. 103-105) identifies factors that alter the manner in which the person responds to role strain. The resources of the role occupant will influence both his perception of and response to role strain. If the incompatible demands causing the role strain come from several roles the person occupies, he will be more likely to be able to manipulate his pattern of roles and lessen his stress than if the incompatible demands arise from a single role. The characteristics of the social structure within which the person enacts his role will modify the impact of role stress and the role occupant's response to role strain. A person will initiate strain-reducing strategies to reduce role strain. These are measures to manage the environment by problem-solving methods, intrapersonal

adaptive techniques, role bargaining techniques, reduced social interaction, and symbolic interaction strategies (Hardy, 1978, p. 73, 94). "High levels of role strain may not only disrupt social interaction but prevent goal attainment" (Hardy, 1978, p. 73). They also have been shown to result in impaired role performance, decreased conformity, and decreased risk taking (Hardy, 1978, p. 105, 107).

Role strain could be viewed as reducing one's "margin," as defined by McClusky's concept of margin (Norris, 1980, pp. 3-4). The less margin one has, the less able he is to deal with stresses. "The surplus of an individual's 'power' over his or her 'load' equals 'margin.'" "Power is the sum of the abilities and resources the individual possesses to manage the tasks of living." "Load refers to the demands made upon a person...." Decrease in "margin" decreases the person's ability to function effectively. When the person moves to Schein's second stage, he reduces his "load" and thereby increases his "margin" to handle new stresses.

Role Shock: A concept closely related to role strain but distinct from it is role shock. It seems that the mechanism of lack of confirmation or disconfirmation of the person's present role behavior, of Schein's first stage of planned change, might result in role shock. Role shock is

defined by Minkler and Biller (1979) as "...the tensions and stresses arising from (1) radical discrepancies between ideal or anticipated roles and roles which are actually encountered or (2) the sudden and significant departure from familiar roles which are either enacted differently in the new situation or replaced altogether by new and unfamiliar roles." The major sources of role shock are "...(1) changes in the relative 'active' or 'passive' nature of one's role, (2) critical discrepancies between anticipated and encountered roles, and (3) changes in the level of role ambiguity experienced by the actor." A key component of role shock is role discontinuity when continuity had been expected. Role shock occurs in "the transition from one role to another...," in a transactional exchange between the person and a social situation new to him. Role shock may be experienced also in role leaving, particularly when the role left behind is heavily bound up with one's identity. But it is the special tensions and stresses arising from discontiguous or conflicting role change events to which the concept of role shock itself refers. " The stresses and tensions of role shock may be of a social, psychological, or physiological nature." The manifestations of role shock may take several forms: reverting to past roles, stress related illnesses, and physiological abnormalities. The person's adaptive ability may be threatened.

The resolution to role shock requires "...internal

changes in self/role conception...." "A selective set of role patterns must be unlearned and new ones acquired while the rest of one's world remains essentially the same." Minkler and Biller (1979) suggest that "bridge people," people who have been through the role transition by successful coping mechanisms, can help the person experiencing role shock to find solutions to facilitate the role transition. They also suggest that role shock can be cushioned by "...recognizing its existence and generating responses that focus uniquely on this aspect of the [role] transition." In this way the role-related stresses and tensions, which before were nameless, can be understood and dealt with.

A more situation specific occurance of role shock was described earlier by Byrnes (1966). He described the concept as it was experienced by male American technical assistants or advisors working abroad through the Agency for International Development. He noted that "...the probability for successful accomplishment is greatest when a friendly, secure individual, not distressed by the possibility of change, is operating in a well-structured situation about which he has been given adequate information beforehand."

Role Change: Once the person, who is the object of planned change, has been motivated to change and feels it is safe to change, as described in Schein's first stage,

unfreezing, he can use the new information being presented to him to alter the way he views his role. This outcome is Schein's second stage, changing. Role change is really not accomplished until Schein's third stage, refreezing. It is in this stage that the person integrates his new beliefs, values, and behavior patterns into his total person. Malasanos (1977, p. 21) makes the point that to experience role change "...involves a change in self-concept...." Role change may consist of "...adding a new role, dropping an old role, or modifying the behaviors associated with a role already a part of a role cluster" (Maurin, 1983, p. 61). This stage, refreezing, will complete the resocialization process. It is the goal of the educational process for these RNs who have returned to school to earn the BSN. The goal is to resocialize them to a professional nursing role.

Summary

Role theory serves as the basis for the conceptualization of attaining the desired goal of the educational process for the technically trained RN - a professional perspective of the nursing role. The RN who returns to school perceives herself as functioning quite adequately in the nurse role. This perception is a result of her initial socialization into the nurse role during her basic educational program and her resocialization to the

nurse role during her work experience as a new graduate. During these processes she acquired the values, expected behaviors, attitudes, knowledge, and skills that she associates with her role as nurse.

As the RN returns to school to earn the BSN, the nursing faculty seeks to again resocialize her to the nurse role, but now to the professional nursing role. Resocialization implies relearning or change. Schein's model of planned change can be applied to this resocialization experience. It consists of three stages: unfreezing, changing, and refreezing. The mechanisms utilized by the change agent in the stage of unfreezing will result in role stress for the object of the change process. Types of role stress are role ambiguity, role conflict, and role incongruity. These types of role stress will result in a subjective state of distress termed role strain or role shock. During the stage of changing, the person alters the way he views his role. And during the stage of refreezing, role change actually is accomplished. The object of change integrates his new beliefs, values, and behavior patterns into his total person. His self-concept is changed. This third stage completes the resocialization process. For the RN student, the resocialization process should result in a change in the way she views her role as a nurse: from a technical perspective to a professional perspective.

Resocialization: Technical to Professional Nursing Role

Resocialization of the RN student returning to school to earn the BSN has been described in the literature from various points of view. Individual RN students have documented, in case study method, their reactions to and the outcomes of their experience in a BSN program. Groups of RN students have analyzed their own experiences and attempted to identify phases that they passed through during the experience. Faculty members who have worked with RN students have also identified stages/phases that they felt the RN students passed through during the educational program. Retrospective and prospective research has also been conducted, with RN students and faculty members, to determine the experiences of the RN student and the outcomes achieved as a result of the BSN program. Others have noted similar educational situations that require resocialization or role change on the part of the students.

Individual RN students: The experiences recounted by several RN's who had returned to school to obtain their BSN were found in the literature. These provide personal insights into the situation and perception of the RN student.

House (1973) described an initial defensiveness and frustration felt by RNs in not receiving credit for their prior nursing education. She also pointed out the

underlying threat felt by RNs educated in diploma and associate degree programs in the trend to educate professional nurses in baccalaureate degree programs. The lack of realization, as she pointed out, that the end product of a baccalaureate and diploma education really is different probably accounted for this initial response. House noted that the internal conflict ended for her when she accepted that she "...was at school to learn new nursing skills and not to be handed a bachelor of science degree in nursing just because I was graduated a few years ago from another nursing program ...." The new areas House became aware of were the encompassing role of the professional nurse and a new set of values.

K. M. Lewis (1973) related her initial resistance to the general education and supporting courses that were required as a part of the BSN program. Because of the educational experience she said she was different; she had grown. Professionally, she could give more; and personally, she was more of an individualist. She cited no specific turning point for this change but it seemed to have evolved as a result of interaction with her classmates in the nursing courses. Lewis did point out the importance of the supportive role of her advisor, especially in the face of the lack of support she received from her work peers and physicians. Lewis was a diploma graduate. She was 36 years old, married , and the mother of two children when she

decided to return to school for her BSN.

Schmiedel (1973) voiced the frustration she felt at not receiving direct credit for the nursing courses in her associate degree program. She felt that the time she had to spend in studying for proficiency examinations to obtain credit for nursing courses was wasted time. She also resented the wasted time spent in nursing courses she had to take that she felt contained material that was repetitive of what she had already learned. Schmiedel identified no specific phases in her educational experience. She did identify the sharing with students of all disciplines as a positive experience and has gone on to earn a MS in nursing and is seeking doctoral education in nursing.

Kuntz (1978), an ADN graduate who returned to school to get her BSN, advised those RNs who were considering returning to school for their BSN that they would not be the same person when they finished their BSN as they were when they began it. She told them that they would have an expanded knowledge base for bedside nursing. Also, their self-esteem and self-image would be enhanced.

The RN who described her experience in "An RN Returns to School" (1982) did not identify a specific evolution of her experience but she described each semester as a crisis. She also said she observed her peers as having "...overreactive adjustments to school." She had to make

major alterations in her lifestyle to take the nursing courses, which were only offered during day classes. She began working nights to accommodate these courses. It took her six years to complete her BSN. As an outcome of her educational experience she said she felt "...more comfortable as a member of the nursing profession." She also felt that her powers of analytical thinking were broadened and sharpened. She identified as essential in returning to school the presence of optimal support mechanisms, being prepared for major changes in one's life, and realizing the financial expense undertaken.

Brainard (1983) did not specify the phases she went through in completing the BSN, but one can deduce them from the description she gave of her experiences. Stage one seemed to be stagnation, which she felt before her decision to pursue the BSN. The second stage was internal conflict. She said this was prompted by fear of giving up some security and trying a new role. Also, her friends looked at her in disbelief when she told them of her decision and her family gave her words of caution. Intimidation was the third stage, initiated by the requirement of taking validation examinations to grant credit for lower level nursing courses. The fourth stage was bitterness, prompted by the prerequisite requirements. The fifth stage was a feeling of being lost, as she encountered the new terminology of the ideas and theories in the upper division

nursing courses. The sixth and final stage was insight, as she realized the breadth of nursing and her kinship with others who had this perspective.

Groups of RN students: Higgins and Wolfarth (1980), in reviewing their return to school, felt they had experienced reality shock. They felt that "the phases of reality shock described by Marlene Kramer were the same for us - first the honeymoon, then shock and rejection accompanied by hostility, anger, and fatigue. Then came recovery with the development of a sense of humor and a lessening of tension, and finally biculturalism with an acceptance of the best of both worlds."

Higgins and Wolfarth suggested parameters for these phases. They identified the honeymoon phase as beginning when they decided to return to school. The phase of shock and rejection began when classes started and terminated the honeymoon phase. They identified the stimulus for the shock and rejection phase to be their perception of the material presented in the classes as "...repetitious and mundane." Contributing to this phase was their setting of unrealistic goals for themselves. This contributed to their feeling of fatigue, threat to their self-image, and serious consideration of quitting. The recovery phase was entered during a course in which they examined the role change from practitioner to student. They identified the support from

fellow RNs and faculty as essential, as had the author of "An RN returns to School" (1982) and K. M. Lewis (1973). The phase of biculturalism seemed to have evolved after the recovery phase was stabilized. Biculturalism is evident when they said that, "Although we still feel loyalty to our original schools of nursing, our values, our attitudes, and our perspectives have changed, as well as our willingness to explore new horizons."

In another report, 12 RN students tape recorded their seminar sessions in professional issues and then analyzed them to understand the changes they had experienced (Balogh, Chasan, Devito, Dolloff, Flynn, Frazier, Okraska, Pemberton, Polito, Portnoy, Turell, Walker, & Wyer, 1980). They reported that this change and transition was felt by them as intellectual and emotional strain. They identified the transition as a transition to a new role. This transition process seemed to them to be composed of six distinct working phases.

The first of the transition process phases identified by the 12 RN students was characterized by emotional turmoil. The second phase consisted of silent, angry compliance. During this phase, many were doubtful if they wanted to remain in nursing. During the third phase they felt that they had changed, but that the system for giving health care had not. They felt helpless. In the fourth

phase, they were not satisfied to remain helpless, but were willing to take risks to initiate beginning changes. The fifth phase was characterized by a concern with their new professional identity. The sixth and final phase was feeling that their new RN/BSN identity fit them now. They could accept freedom and growth and assume a leadership role.

Faculty observations: Woolley (1978) described her experience and observations in teaching the first and second class of RN students in her institution. The second class did not experience the same intensity of responses as the first class did. Woolley did not specify stages of the RN students' experiences, but her description of their responses seems to indicate three stages in what she views as the resocialization of the technical nurse to professional status. This resocialization is basically an identity or role change.

The first stage in this resocialization was one of tension and anxiety manifested by resistance to new ideas. Several factors seemed to cause these reactions: need to discard old ways of thinking and behaving, dealing in a multifaceted way with issues that were not clear-cut, and lack of family and work peer support. The second stage, which began by the beginning of the third trimester, was characterized by a more relaxed situation. She attributed

this situation to the fact that the most discontented RN students had withdrawn from the program. The third stage was the acceptance of the new perspective - the knowledge, behavior, and values. The entry into this third stage seemed to come for these students as the result of an attendance at a research conference. There they found they could follow the presentations and heard other persons saying the same things about nursing as the instructors had been saying.

Woolley used four theoretical frameworks to interpret her observations of the reactions of these RN students to their educational experience. The theory of social influence of H. C. Kelman describes the steps of compliance, identification, and internalization in the process. I. H. Simpson also defines three similar phases of socialization which consist of anticipatory role expectation, attachment to significant others in the social system, and internalization. The stages of planned change in professional education developed by E. H. Schein are unfreezing, changing, and refreezing. P. Marris has described the responses to personal and social change. These responses are feelings of loss and grief. Changes that represent loss from the discrediting of familiar assumptions create a crisis of discontinuity. From this kind of crisis arise both innovation and despair.

Muzio and Ohashi (1979) point out that the system of thinking that the RN student has used previously conflicts with the new theoretical framework of nursing theory. She may have to reject some prior learning based on that prior system of thinking before she can develop a system of thinking that can incorporate nursing theory. Another source of tension for RN students, pointed out by Musio and Ohashi, is the inadequacy of their prior level of knowledge or cognitive skills. They tend "...to be at the levels of comprehension and application". "The higher skills of synthesis and evaluation have not been strongly encouraged." Also, "the older RN student may not have developed skills in formal or logical thinking and may still be functioning at the concrete level...."

What RN students are involved in, pointed out Muzio and Ohashi, is the difficult and often painful task of role change. "For them, prior values, norms, and standards must be rejected before new roles can be assumed."

Shane (1980, pp. 119-126), as an outgrowth of her close work with 50 RN students, has described what she calls the "returning-to-school syndrome." She used the theoretical framework of culture shock to explain this syndrome (p. 120). She felt that it was an emotional crisis that the RN student experienced in the baccalaureate nursing setting (p. 119). She defined the returning-to-school

syndrome as "...a series of positive and negative emotional states experienced to some degree by all registered nurses entering baccalaureate nursing programs, arising from the differences between the nursing world they leave and the world of the BSN program they enter" (p. 120). She observed that there appeared to be no sex-linked variances in the returning-to-school syndrome.

There are three phases in the returning-to-school syndrome that Shane delineated. Phase one is called Honeymoon. In the Honeymoon phase, the RN student feels good about herself because she is finally on the way to a BSN. Her original role identity as a nurse is reinforced since she sees similarities between her present experience and her previous education (p. 120). The length of time for this phase varies for each RN student, but it eventually ends. Shane observed that it "...most often terminates during the time the RN is enrolled in the first class that contains substantial nursing theory or clinical practice" (p. 121).

The second phase of Shane's returning-to-school syndrome is conflict. This phase is entered when "the RN begins to perceive that her own concept of nursing is no longer appropriate and does not bring the expected results..." (p. 121). "This alienation is totally unexpected and seems especially cruel to those RNs who experience it..." (p. 121). Turbulent negative emotions

characterize this phase. The height of this phase is marked by ego-shattering and typically gives rise to some form of depression. Outwardly, the RN student is hostile and she strongly rejects the "new culture" (the BSN program) (p. 121). Shane saw this response as the beginning of reintegration. She felt that "the length of time any individual spends in the hostility phase and the mode of resolution probably depends on the overall resiliency of the individual, the intensity of the emotions and experiences she is feeling, and the interpretation and guidance provided by those significant others (faculty, peers, family) surrounding her" (p. 122).

Biculturalism is the third phase of Shane's returning-to-school syndrome. It is a transitional experience. This phase is the most positive resolution of the syndrome. It is characterized by a return of a sense of humor, a decrease in anxiety and tension, and a unique perspective with which "...to analyze herself, the nursing role she assumes, and nursing as a profession..." (p. 123). "Achievement of biculturalism, [is] the ability to be as comfortable and effective in one culture (school) as in another (work)..." (p. 122). Her sense of what nursing is contains elements of both the first and second culture and is forever altered (p. 123).

Shane identified two dead-end resolutions to the

conflict stage which prevent entry into the biculturalism phase: false acceptance and chronic hostility. In the dead-end resolution of false acceptance the RN student "...'plays games' with faculty and herself in order to complete the program, but does not truly believe in the value, worth, or validity of the baccalaureate program" (p. 123). Those RN students who resolve the conflict stage by chronic hostility experience prolonged psychic pain and "...spend their entire time in academia vigorously defending their original nursing ego identity - fighting, fighting, fighting" (p. 123). Shane observed that the most ego-threatening time for the RN students in their program was the semester that the RN students had their first substantial clinical nursing experience (p. 125).

Gray (1980, p. 18) summarized three stages in the resocialization process of the RN student in a BSN program. In Stage I the RN opens herself up to conscious or unconscious influences from role models. "In Stage II the RN changes her behavior to conform with the behavior exhibited by the role mode." It is in Stage III that "...the RN makes the new values, and the behavior derived from those values, a part of her own value system."

Dustan's (1980) experience with RN students verified the hostility that they manifest. She felt that the hostility was directed mostly toward the challenge

examinations that they must take to earn course credit for lower division nursing courses. Her experience was that a high success rate on these examinations decreased the hostility manifested by the RN students.

Hiraki and Parlocha (1983) termed the experience of RNs returning to school as academic shock and likened it to the reality shock that new graduates experience as they enter the work place (p. 67). They defined academic shock as "...the state of conflict resulting from the discrepancy between the RN's expectations of returning to school and the realities she encounters" (p. 67). Hiraki and Parlocha identified the predisposing factors to academic shock as leaving the security of an established lifestyle and the required reshuffling and juggling of multiple roles (p. 68). The common defense of the RNs to academic shock is anger, which is expressed in one of two ways: aggressive or assertive behaviors (p. 69).

Hiraki and Parlocka noted that, aggressive behaviors, which are the least healthy for expressing anger, may be indirect or direct (p. 70). Indirect aggression may be displayed by "...depression, dependency, 'yes, but' behavior, and passive aggression" (p. 70). Direct aggression is expressed as hostility (p. 73). The two outcomes of aggressive behavior are nonresolution and resolution. With the outcome of nonresolution, the anger the RN student feels

is not resolved and it interferes with her learning. She may drop out of the program, but she may also complete the program still harboring her anger (p. 74). In the resolution outcome, the RN rechannels the unhealthy aspects of her anger towards assertive behavior (p 74). To achieve resolution the RN student must first acknowledge her anger, then identify the source of her anger, and finally think of ways to constructively express her anger for tension relief (p. 74). Assertiveness gives constructive expression to anger and uses up the energy generated, in a positive way, when confronted with the frustrations of returning to school (p. 86). Resolution also means "...knowing the difference between what you can and cannot change and behaving accordingly" (p. 74).

Mooneyhan (1983) observes that, although the BSN program for RNs only that she directed was denied accreditation by the Board of Review of the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing, the graduates of the program felt that they practiced "...a higher level and broader scope of nursing practice" as a result of their educational experiences. They felt that excellence in professional nursing could come only through baccalaureate education in nursing.

Research on RN students: Gortner (1968) compared senior basic generic BSN students and RN students in a BSN program who had completed the general education and prerequisite courses but had not yet taken any nursing courses. Her sample consisted of 231 RN students and 244 basic generic students in 12 institutions in seven states. On the Allport-Vernon-Lindzey Study of Values (AVL) the RN students scored significantly higher on the theoretical values scale (one of six scales) than the generic basic students. Gortner found that the scores of the RN students and the generic basic senior students on the Omnibus Personality Inventory (OPI) are similar, but some scales show significant differences between the two groups. The RN students had significantly higher scores on the Thinking Introversion and the Theoretical Orientation scales than the basic generic senior students. The RN students had greater measured theoretical orientations and were more disposed to reflective and logical thinking than the basic generic senior students. Also, on the scales Social Introversion and Masculinity-Femininity, the RN students scored significantly higher. "Registered-nurse students experienced greater limits on impulsivity and emotional expression than did basic students" as evidenced by their lower scores on the Impulse Expression scales and higher scores on the Repression-Suppression scale.

In the area of motivational factors, RN students and basic generic senior students differed significantly in all seven areas of choice determinants of higher education, but only in four of eight areas of goals or aspirations of higher education. "Responses to intellectual and academic determinants and goals of higher education did not differentiate the student groups as well as did the responses to professional determinants and goals."

The reasons for choosing nursing as a career were similar for the RN students and the generic basic senior students. Sources of satisfaction in nursing practice were similar for both groups of students. Greater numbers of basic generic senior students responded to all stressful situations cited than RN students. Tolerance for criticism was lower in the basic generic senior students. The socioeconomic and educational backgrounds were lower for the RN students.

In summary, Gortner found greater professional orientation in RN students just entering the nursing courses than in generic basic nursing students in their last year of nursing courses. Value preferences were similar for the two student groups. "Registered-nurse students seem to be more highly motivated toward professional and intellectual goals than basic senior students." The RN students had higher

controls on impulsivity and expression than the generic senior students. The basis for the use of these two groups for comparison may not be valid. Gortner stated she "...attempted to differentiate the registered-nurse from her closest academic and professional colleague, the senior nursing student in the basic collegiate program." One might question if the generic basic senior student is the entering RN student's closest academic and professional colleague.

Hogan (1972) sought to determine the effect of BSN education on RN students. She wanted to determine if they became more professional in their attitudes toward the nursing profession and if they did, did this remain stable after returning to the work situation. She administered to 300 RNs a questionnaire consisting of a Semantic Differential and a Likert-type professionalism scale. The RNs were divided into six categories: RN/BSNs eight years post graduation, entering RNs to the BSN program, graduating RN/BSNs, graduating generic basic BSNs, RN/BSNs one year post graduation, and generic basic BSNs one year post graduation.

Hogan found that entering RNs to a BSN program displayed the least professional attitudes toward nursing. The most professional attitudes were found in the graduating RN/BSNs and RN/BSNs eight years post graduation. One year

post graduation RN/BSNs had lower professional attitudes than graduating RN/BSNs but the same pattern was also found for generic basic BSNs. Those that viewed nursing the most positively and thought it to be the most active and potent were the graduating generic basic BSNs and the one year post graduation generic basic BSNs. Those who viewed nursing the least positively and thought it to be less potent and active were the RN/BSNs eight years post graduation and the RN/BSNs one year post graduation.

Hogan concluded that the completion of the BSN by the RN may very well increase the RN's professional attitude toward nursing but this diminishes upon graduation. However, it may increase again if the RN/BSN remains employed for more than one or two years following graduation.

Corona (1973) studied the differences in RN/BSN senior students and generic basic BSN senior students. "The purpose was to identify similarities and differences between the two groups as related to components of professional nursing...." The components included were: "...factors of physical, social, psychological, cultural, and human development significance." She found no "...significant differences between the two groups' selections of components essential to plan professional nursing care."

Hover (1975) found that Diploma graduates working on the BSN held opinions and goals approaching those of basic generic BSN graduates. She administered her questionnaire to 29 Diploma graduates in a BSN program and 20 basic generic BSN graduates.

Bullough and Sparks (1975), using the Nursing Orientation Towards Care or Cure Scale, which they and their students developed, found that graduating basic generic students and graduating RN students from BSN programs had similar care/cure orientations; they were care oriented. Their sample consisted of 173 basic generic students and 19 RN students.

Bullough (1979), again using the care/cure scale, found that of the basic generic BSN students, 50% were cure oriented, but only 44% of the RN/BSN students were cure oriented. She also found that 50% of the basic generic BSN students were care oriented and 56% of the RN/BSN students were care oriented. Her sample consisted of 168 basic generic BSN students and 227 RN/BSN students. The students were at various points in their BSN program.

Wilson, Vaughan. and Gaff (1977), in an evaluation of their Second Step open curriculum model at California State College in Sonoma, California, conducted oral interviews with 135 of their RN students concerning the impact of the

first year in the program. One of the areas covered in the interview was the acquisition of new professional roles. "A significant portion of the students actually experienced change in their role concept of themselves as nurses." This change in role concept consisted of being more independent in their practice, becoming aware of the importance of the teaching role of the nurse, acquiring awareness of the psychological responsibilities involved in treating the "whole person," seeing the important function the nurse had in health maintenance and mediating between the family and the overall health team, and viewing the hospital patient as a community person tied inseparable to family, economic group, life style, and culture. Wilson, Vaughan, and Gaff did not attempt to identify stages that the RN student passed through as she progressed toward this new role concept.

Wilson and Levy (1978) looked at the problem of attrition in one program for RN students - California State College, Sonoma, a two-plus-two program. The attrition rate was less than 18%. The overall rate for nursing programs was 33%. They analyzed the taped withdrawal interviews of 14 RN students using strategies for the discovery of grounded theory. They identified changes in attitude and behavior toward the program in these RN students. Wilson and Levy found these changes to fall into phases which they called

anticipatory, transitional, and adjustment periods.

The RN students who withdrew from the program were attracted to the Sonoma program because of the great enthusiasm it had generated. But, they varied in their enthusiasm for and commitment to nursing practice. This variance was in three categories: (1) low commitment to nursing practice, (2) high commitment to nursing practice but low commitment to the practice setting, and (3) high commitment to nursing practice and high commitment to the practice setting.

Before entering the RN/BSN program, these RN students, who later withdrew, had personal and professional expectations of what they hoped to gain from the program. In the personal area, they expected to grow in confidence, creativity, and assertiveness. In the professional area, "...they expected to increase their knowledge and skill by building upon what they were already interested in and knew." A broadening of awareness in nursing theory, preparation in a different area of nursing practice, or both were also hoped for. They also had diverse "...ideas as to how these professional and personal expectations would be met within the nursing program. They were aware that their expectations were mere speculation on their part. "All of the withdrawal students experienced a transition from a

known situation to an unknown one."

During the period of assessment of, and adjustment to, the program, two processes were simultaneously interacting within the RN student: the matching process and the balancing process. This period was critical to a student's continuation or withdrawal from the program. "The individual perceived and coped with both processes using her personal characteristics, such as self-image, values, knowledge, and capabilities."

The matching process could be viewed as an exchange between what the program is selling and what the RN student is buying. The balancing process employs two mechanisms (pressure-increasing and pressure-releasing) and is in reciprocal union with the matching process. "If the pressure-increasing mechanism [of the balancing process] is heightened, the student's commitment to the program may decrease" unless there is a successful match between the RN student and the nursing program. "The pressure-increasing factors [of the balancing process] can be both internal and external to the nursing program." Pressure-releasing strategies are the other mechanism used in the balancing process. Some of these strategies were use of supportive persons and financial or academic resources, cutting back in areas that created feelings of pressure, and seeking

rewards. The "rewards were closely associated with a successful union in the matching process."

The characteristics that seem critical to the stance the RN student takes in relationship to both the matching and balancing process are the self-image, personal values, knowledge, and capabilities. For the RN students who withdrew, how they saw themselves was the factor that had the most impact on their relationship to the program. It either made the matching process difficult or facilitated it. For the RN students who withdrew, their self-images also influenced the balancing process by allowing them to be able or unable to use pressure-releasing mechanisms.

The values of the RN student also affected how the matching and balancing processes interacted. How the RN student perceived the relevance of the program depended on her values. For the RN students who withdrew, they didn't match. Also dependent on the RN student's values were her expectations of the teaching strategies and the structure of courses. For withdrawal students, they didn't match.

The matching process was also enhanced or impaired by the RN student's level of personal and/or professional knowledge and capabilities. For the RN students who withdrew, their capabilities and knowledge worked against a comfortable and satisfying interchange with the nursing

program.

The RN students who left the nursing program did so in one of three ways: stepping out, dropping in, or switching out. Those who stepped out have returned or intend to return to the program in the future. The RN students who dropped in "...left the program for a career in another profession, for another nursing school, or for nursing career advancement." "The third type of withdrawal category, switching out, included the student who often felt a deep disaffection with nursing and had no career or educational plans."

Wilson and Levy concluded that since the decisions to withdraw from the BSN program were unique, it was not possible to devise a screening tool. They felt that "...the major responsibilities of faculty in nursing programs are to represent the program accurately, to advise and counsel students objectively, and to allow them the pursuit of their personal pathways."

One RN student conducted a survey among the RN students in the university she attended (Hillsmith, 1978). She received 76 returns to her questionnaire sent out to 119 RN students. She found a great deal of ambivalence over the BSN among the RN students, which she attributed to the following situation: "The insistence that one is a

professional while, at the same time, one is pursuing the degree which labels one 'professional'...." Frustration and anger were expressed by 40% of the respondents at the imposition of the BSN on them by others. Yet, 70% of the respondents indicated that "...studying for the BSN had given them a broader, sounder base for nursing practice." Although Hillsmith did not attempt to establish stages that these RN students passed through, she did make the following observation: "I see both denial and anger, but very little grieving or acceptance by the majority of nurses in the survey." Hillsmith also observed, as others had, the lack of encouragement and emotional support that these RN students received from their families.

Notter and Robey (1979) found that after one year in a BSN program, graduates of ADN programs were more sure than graduates of Diploma programs that the BSN program had helped them take a different approach to nursing practice (p. 126). Of the ADN graduates, 47.8% said "yes," 21.7% said "no," and 30.4% said they weren't sure; whereas, 35.9% of the Diploma graduates said "yes," 26.6% said "no," and 37.5% weren't sure.

Notter and Robey also used a modification of Corwin's Nursing Role Conception Scale for data collection. They found that, at graduation from the BSN program, basic

generic and RN students had similar role orientations. Those graduates with high professional role conception scores were 50.5% of the basic generic students and 51.2% of the RN students. For low bureaucratic role conception scores, figures at graduation were: 69% of the basic generic students, and 66.3% of the RN students (p. 271). There were differences based on the type of prior nursing program of the RN student. Of those who were Diploma graduates, 44.9% had high professional role conception scores and 60.1% had low bureaucratic role conception scores at graduation from the BSN program. Those who were graduates of an ADN program had 50% high professional role conception scores and 66.4% had low bureaucratic role conception scores at graduation from the BSN program (p. 272).

Ipock (1982) found that 97.5% of RN students pursuing the BSN manifested anger to some degree. Anger was manifested most frequently during the first semester of the nursing courses. The manifested anger was both verbal and non-verbal. Verbal manifestations of anger were present in a variety of situations: theory classes, clinical conferences, and unscheduled group meetings. Non-verbal manifestations of anger ranged from skipping class to quitting the program (p. 89). Ipock's data came from 180 different BSN programs with RN students. Faculty members answered her questionnaire regarding the manifestations of

anger in the returning RN student (p. 65-67).

Hogle (1982) conducted open-ended structured interviews with four RN students who were midway through their nursing courses. Up to this midpoint she identified the following phases these RN students had passed through: lack of self-actualization (before returning to school), motivation in face of familiar expectations (during general education and prerequisite courses), frustration accompanied by some degree of anger and depression (during first nursing course), controllable stress (during validation examinations), tolerated but relevant stress (during second nursing course), and increased self-confidence from growth/maturity (outcome at midpoint of BSN nursing courses).

From her study, Hogle isolated the following constructs: degree of congruence of expectations and reality, role of the RN student, relevance to work situation, lifestyle changes, frustration manifested by various emotional states, and professional perspective. She hypothesized the following relationships between the identified constructs: (1) the less congruence there is between the RN student's expectations of the program and the reality of the program content, the greater will be her frustration manifested over various emotional states,

(2) the less clear she is of her role as a RN student, the greater will be her frustration manifested over various emotional states, (3) the less perceived relevancy of the program to her work situation, the greater will be her frustration manifested over various emotional states, (4) the greater perceived lifestyle change, the greater will be her frustration manifested over various emotional states, and (5) the greater her frustration manifested over various emotional states, the longer it will take for her to attain the professional perspective in knowledge, behavior, and values.

Little and Brian (1982) reported on a longitudinal study of 236 RN students in six Second Step BSN programs. These RN students completed questionnaires on entry and again on exit from the BSN programs. The questionnaires were the Omnibus Personality Inventory (OPI) and a questionnaire developed by staff of the National Second Step Project which included 60 items covering various professional attitudes and preferences. From the answers to these 60 questions, three professional attitude groups emerged by use of factor analysis: challengers, interactors, and mainstreamers. Also from the staff developed questionnaire, three additional measures of professionalism were derived: professional interest, professional commitment, and professional competence.

The challengers, interactors, and mainstreamers present three different images of nursing. The challengers viewed nursing as "...a profession demanding high technical as well as intellectual performance." The dominant personality characteristics of the challengers were independent, autonomous thinkers, feeling of personal integration and strength, and comfortable with abstractions. Professionally, they were "...less interested in the more traditional clinical areas...." They were "...more restrained in rating their own clinical and professional skills." Politically, they "...tend more toward the liberal end of the spectrum." "The women's movement has had an impact on them."

The interactors "...value the nurse-patient relationship, and focus upon the satisfactions derived from communicating and interacting with their patients." "They rate themselves higher in many areas of professional competency...." Their political views are "...moderate or toward the liberal end of the political spectrum...." "They see traditional sex roles as a problem...." Interactors are "...oriented toward new roles in nursing...." They are "...willing to make a commitment and become professionally involved." They are optimistic and enthusiastic about nursing.

"The mainstreamers get most of their satisfaction from the traditional tasks of nursing and their relationships within the health care system...." "They like their world neat and tidy, without ambiguity." They score the lowest on theoretical orientation and complexity. Mainstreamers have less need for independent thinking, are less extroverted and trusting, are more anxious and controlled, and are conservative in orientation. They like "...practical, applied activities with tangible outcomes." They prefer traditional nursing roles and accept traditional sex roles. On sociopolitical issues they are moderates. Mainstreamers are the least committed of the three groups and are slightly less involved in their profession than the challengers and interactors. They "...judge themselves a little more competent than the challengers...."

In summary, the RN students represented by these three images of nursing were alike in education, amount of professional experience, family background, age, recent work positions, race, religion, and socioeconomic status, but dissimilar in personality characteristics, sociopolitical views, and professional attitudes and values.

Over the two years of the second step BSN program, all of the RN students made significant gains on eight of the 12 measures in the OPI: intellectual characteristics (Thinking

Introversion, Theoretical Orientation, Complexity, Estheticism, Composite Intellectual Disposition), Impulse Expression, Personal Integration, and Practical Outlook (less utilitarian or materialistic in values). Challengers and interactors made more gains than mainstreamers in intellectual thought.

Challengers and interactors became more critical of the health care system, but the mainstreamers did not change. Challengers made the greatest change in seeing "...sex roles as either economically disadvantaged to women or damaging to both sexes"; mainstreamers made the least change.

All the RN student made significant gains in self-assessment of professional interests, competency, and commitment. These gains made the RN students more alike at exit from the Second Step programs than on entry to the programs. These groups of RN students did not differ on exit from the programs; nor were there great differences at entry to the programs. In only a few professional areas were there differences between entry and exit among the groups (images of nursing). Challengers became even less desirous of working in hospitals and lost some interest in the areas of nurse practitioner and community health. For interactors and mainstreamers, the areas of nurse

practitioner and community health remained constant or diminished slightly. "The challengers appeared most affected by the educational process and mainstreamers least affected."

Little and Brian concluded that "...students entered the Second Step program with different images of nursing" and that "all students were affected by the educational process, but not the same way." Some of the images of nursing that the RN students entered with were closer to what nursing defines as professional than others. "Students with more of a professional orientation were differentiated from students with a more technical orientation by a greater need to question and expose themselves to life." Before they returned to school, some nurses appeared to be well on the road to professional nursing. "Because of this state of readiness, they responded more wholeheartedly to the socialization process." Those with more traditional views of nursing made fewer changes. But, all the RN students changed in their professional attitudes. They were not fixed in their attitude. It is not known if these changes in professional attitude will be translated into behavioral changes.

The identification of these three images of nursing suggests that "...the differentiation between technical and

professional roles may be too simple," point out Little and Brian. "To assume that a nurse remains at a technical or novice level simply because he or she has not completed a baccalaureate is to discount the individual's capacity for growth through a variety of channels."

Leddy (1982) used the Jackson Personality Profile to determine if RN students in one upper division "RN-only" program showed personality changes that were compatible with increased professionalism. Changes compatible with increased professionalism would be an increase in cognitive structure, sentience, achievement, change, and autonomy; and a decrease in harm avoidance, abasement, and dependence. Sixty-seven RN students took the profile on admission to the program and again at the completion of the program. These RN students showed a significant increase in change, dominance, harm avoidance, and sentience and a significant decrease in abasement. Three of the eight changes compatible with increased professionalism were found. One change found (increased dominance) was not compatible with increased professionalism.

Smullen (1982, 1983) used an ethnographic approach in her research on RN students in two different second step BSN programs. Her study was based on 400 hours of observations and 82 in depth interviews of 122 RN students in eleven

nursing courses over a period of fifteen weeks. She found changes over the length of the program in these RN students that were consistent with professionalization. But, she also found that the changes in the lives of the nurses as women emerged as equally compelling (1983, p. ii).

Smullen (1982) focused on three dimensions of the experiences of RNs returning to school: development of the professional role, understanding of the health care system, and approach to delivering patient care. For the dimension of the development of the professional role, the RN student comes with "...a lack of a clear identity in the nursing role" (1982) but experiences an awaking to the broader, deeper, and more powerful professional role. She was socialized to a new role, a new status, and a new identity. She became preoccupied with the acquisition and use of power.

Smullen found that in relation to the health care system, she comes with bewilderment as to its organization and operation, but becomes awakened to an understanding of this system and how she can institute change. In relation to the dimension of approach to delivering patient care, Smullen found that the RN students come perceiving themselves as quite competent and it is only when, in the clinical practice area, they are challenged to identify

rationale for their actions and to describe the process by which they care for patients that they begin to see gaps in their prior education and present nursing care. These RN students then broaden their perspective concerning patient care and look at the patient as a client and a whole person. They begin to consciously incorporate the use of the nursing process in their nursing practice.

Smullen (1983, pp. 501-508) sought to uncover, examine, and describe the classroom processes experienced by RN students returning to school. She noted the difference between the public faces of the RN students presented when the teacher was present and the impassioned, angry private faces revealed at breaks in class time. She notes the rituals of the classroom, the efforts to please the teacher, and to determine what it is she really wants. The power of the teacher in the resocialization of the RN student from technically trained nurse to professional nurse is identified. Smullen reveals the investment of energy, pain, and struggle as these women attempt to integrate their multiple roles. She notes the bond of the fellowship of suffering that unites the RN students. It seems integral to the resocialization process and critical to the survival of the RN students. Smullen notes an ironic paradox: "That which would reduce the stress and make more bearable the experiences of the RN student might also reduce the

desirability and potency of the aspired role, and thus detract from the effectiveness of the resocialization process" (1983, p. 508).

Smullen describes the ebb and flow of energy and tension of the RN students and the near panic at mid-semester. They struggle to survive to the end of the semester, to the break they will get from school. She emphasizes that the multiple roles that the RN students must integrate underlie the complexity and intensity of the classroom processes. The role change that has occurred in the RN students in relation to nursing cannot be isolated from the change that has occurred to them as women; they influence each other in a reciprocal manner. Smullen describes the faculty as only partially aware of the pain and struggle of the RN students and of the power they wield as teachers.

Baj (1983) studied 141 RN/BSN students and 110 generic basic BSN students in 18 basic generic BSN programs in California to assess their levels of role stress and role strain. She found no significant differences between the levels of role stress and role strain experienced by the RN/BSN students and the basic generic BSN students. In both groups of students, role ambiguity was a valid predictor of levels of role strain. Role stress was measured by using

the Rizzo Conflict/Ambiguity Scale and role strain was measured by using the Spielberger State-Trait Anxiety Inventory.

Holzemer, Anderson, Weiss, and Slichter (1983) sought to measure the change or acquisition of professional socialization, of RN students pursuing the BSN, through measuring their views of nursing practice. They found no significant change on the Real and Ideal forms of the Benner Scale, between the time of admission and finishing the BSN program, for the first class in the program. Also, no changes were found, for this time period for the first class, on the Omnibus Personality Inventory (OPI). But, on the Intellectual Disposition Categories of the OPI, which support the goal of professionalism, a shift was noted. These students shifted into categories 1-3 (active learners) which characterizes students who seek out and involve themselves in a variety of perceptual and learning activities. But, no differences, for this time period for the first class, were noted between the learning style factor preferences on the Learning Style Inventory. The Benner Proficiency Scale is proported to be an indicator of attitudes of professionalism and behavior. The Intellectual Disposition Categories is derived from the first six scales of the OPI and gives further information about the type and extent of commitment to general learning and intellectual

activity. The Learning Style Inventory measures the preference for four learning modes: concrete experiences, reflective observation, abstract conceptualization, and active experimentation.

Owen (1983) sought to discover what factors influence negative feelings of RN students during the BSN program. She used as her subjects RN students beginning courses in the nursing major and those at the senior level. Her subjects were 225 RN students in four Northern Ohio universities. She found that "RN students in generic programs have more negative feelings during baccalaureate education than RN students in upper division programs." The following were found to contribute to the RN student's negative feelings and behavior during their BSN education: liberal arts faculty and courses, nursing courses, job and personal life, and perceptions they currently hold about the nursing program they are enrolled in.

Sullivan (1984) found that RN students (N=53) had higher scores on the Torrance Test of Creative Thinking on graduation than on entry into the BSN program. She noted that this finding is the opposite of what has been reported for generic basic BSN students. She pointed out that the RN student exits the BSN program with some characteristics that the basic generic BSN student does not have and in this

instance the different characteristic is positive and enhancing to nursing practice rather than detracting.

Hunter (1985) used two cohort groups of entering and exiting RN students from three BSN programs and also the exiting generic basic students from these programs. She found that the entering and exiting RN students differed significantly on ideal professional role conception but not on ideal humanitarian (service) and bureaucratic role conception. No difference was found on the ideal professional role conception between the exiting RN students and exiting generic basic students, but the exiting RN students held significantly higher scores than the exiting generic basic students for the bureaucratic role conception. For the ideal humanitarian (service) role conception, the exiting RN students held significantly lower scores than the exiting generic basic students.

Hunter concluded that the RN/BSN programs were successfully socializing the RN students into professional nursing roles. She also concluded that role conceptions of the RN/BSN were more compatible with nursing practice in the acute care setting. In contrast, role conceptions of the basic generic BSN were more compatible with nursing practice in the distributive care setting.

Soefje (1985) found that RN students exiting from BSN

programs scored significantly higher on the Inner Directed (one of two major scales) and Nature of Man (one of ten subscales) scales of Shostrom's Personal Orientation Inventory (POI) than RN students on entry to the programs. They also scored significantly higher on exit on the subtest of Evaluation of Arguments (one of five subtests) on the Watson-Glaser Critical Thinking Appraisal (CTA). She used the POI as a measure of autonomy and the CTA as a measure of problem solving ability, both selected aspects of professionalism. Her sample was 110 entering RN students and 136 exiting RN students from 10 BSN programs in Texas (pp. iii-iv). Soefje concluded that "baccalaureate degree programs in nursing are meeting their responsibilities of 'professionalizing' registered nurse students, at least to some extent" (p. 122).

Blicharz (1985) sought to answer the following question: "Does the educational process influence role conceptions held by RN students in making the transition from a technical to a professional nursing role" (p. 158)? She administered the Corwin Role Conception Scale to 455 RN students in 13 BSN programs in New Jersey. Of the 455 RN students, 165 were in their first nursing course, 136 in their middle nursing course, and 154 in their final nursing course (pp. 159-160).

Blicharz found that at all three time periods the dominant role conception of these RN students was a professional one, in contrast to a bureaucratic one, although the bureaucratic role conception was fairly high (p. 165). She did not report the service orientation. No significant difference between the scores on the bureaucratic role conception was found across the three time periods. But, on the professional role conception scores, those of the RN students in the last nursing course were significantly higher than those for the first or middle nursing course (p. 163).

On the question of role conflict, Blicharz found that at all three time periods the RN students showed both bureaucratic and professional role conflict. Professional role conflict was more predominant than bureaucratic role conflict at all three time periods (p. 167). For bureaucratic role conflict, only the scores between the RNs in the first and last nursing courses were significantly different (p. 163). The scores for bureaucratic role conflict showed a slight decrease for the RN students in the middle nursing course (p. 163). For professional role conflict, the scores for the RN students between all three time periods were significantly different (p. 163). The highest role conflict scores for both professional and bureaucratic role conception were found for the RN students

in the last nursing course (p. 167).

Analogous educational situations: Shane (1980, p. 126) has noted that "the phenomenon of enrolling skilled licensed professionals in education programs leading to the same licensure is certainly a rarity in the world of higher education in the United States and may be unique to the profession of nursing." An attempt was made, though, to identify similar educational situations that required resocialization or role change of it's students.

Malkemes (1974) described a program to prepare nurse practitioners at the master's degree level. To become a nurse practitioner the nurse must experience a role change - a change in her nursing identity and self-concept. Malkemes used the resocialization model to explain this change. The most important components of the concept of resocialization are process and roles. "Process, which analytically has a beginning and an end, denotes a continuum of steps building on one another. Role, strictly defined, refers to an organized set of behaviors but also includes the underlying knowledge and attitudes that are appropriate - in fact, special - to the performance of those particular behaviors." Malkemes stated that "three basic assumptions underline the use of the resocialization model: (1) that a beginning point can be established; (2) that a defined

process can be described in relation to critical points within the process; and (3) that the end point can be clearly delineated in relation to changes of attitude, knowledge, and behavior."

Using the resocialization model, Malkemes identified three phases in the nurse practitioner role change. In phase one, the students enter the program motivated to practice nursing in a different way. The content of the program causes the student to raise questions about her role as a nurse. This questioning reaches a peak about a month into the program and leaves the student highly confused about where she is going and what she is doing. This is a major turning point called role crisis "...and is characterized by extreme anxiety, frustration, negativism, and striking out at faculty and fellow students." "Resolution of the role crisis depends upon faculty recognizing when the crisis occurs and moving the students quickly into Phase II..."

Phase two of the resocialization model is the interdependent phase. In this phase the role of the nurse practitioner is established. "The student's experiences during these six weeks give her the necessary opportunities to pull the parts of the role together, as well as to increase the knowledge on which the role in the clinical

area is based."

In phase three, the independent phase, the student is more comfortable in the nurse practitioner role and her need for faculty support and guidance diminishes. This diminished need is a result of content that "...centers on independent decision-making with a group of clients." "The learning experiences in this segment reinforce the ... role, helping to establish it more firmly as the nurse's identity." Malkemes felt that "the most critical change appears to be an attitudinal one."

Several papers were found in the literature that described the resocialization or identity change required in psychiatric residents. Klagsbrun (1967), a psychiatric resident near the end of his three year residency, related the conflicts he needed to resolve to develop a professional identity. He saw his changing attitudes up to this point fall into three phases. In phase one, the resident uncritically accepts what is taught in psychiatry. Phase two is characterized by "...cynical disbelief and nihilism" because of the "...severe disappointments the resident feels when faced with situations that do not improve in spite of the theories...." In phase three, the resident attempts to gather his experiences into "...a meaningful whole and extract ideas and workable methods from them." This

viewpoint is an highly individual and personal one. He spoke of his development of a professional identity, as a psychiatrist, as a transition.

Merklin and Little (1967) described a syndrome which they called the beginning psychiatric training syndrome which occurs in the first year of psychiatric training. It is usually self-limiting and diminishes as the resident's personal and professional security increases, as he adapts to his new role of psychiatrist. They compare the changes that the resident experiences "...to the usual developmental responses of the child to the normal stress of growing up." There are three phases to the syndrome: prodrome, reaction, and resolution. They feel that the experience of the syndrome by the resident is "...essential to the making of a psychotherapist."

In the first phase of the beginning psychiatric training syndrome, prodrome, the resident seems to have a change in his attitude toward his patients, peers, and instructors. In the second phase, reaction, the resident experiences subjective feelings of "...diffuse tension, anorexia, unexplained fears, insomnia, excessive fatigue, depression, indecision, inability to concentrate, and irritability." To the onlooker, these subjective feelings appear as " difficulty with authority, distractibility,

learning blocks, and physical fatigue." The third phase, resolution, may develop slowly. In this phase the resident changes his approach to his patients.

Merklin and Little feel that the syndrome is influenced by two factors: the training environment and the personality of the resident. "The symptoms of the syndrome will be determined by the manner in which the resident can handle his anxieties and guilt." "Often the resident is unaware he has experienced the syndrome until its resolution."

Worby (1970) applied Erikson's concept of identity crisis to illuminate the psychiatric resident's experience of his first year. Worby viewed professional identity or work identity as a part of the larger issue of personal identity. "The early phase of a resident's development as a psychiatrist has been viewed as a normative professional identity crisis because of the demand for a radical shift in perspective in a relatively short period of time." Worby described the stages of this early phase. The first stage is that of receptivity. This receptive response is an attempt to meet his acute need at the outset. "The relative independence of authority achieved by the physician prior to beginning the psychiatric residency is immediately challenged upon beginning the first year. Whatever his age,

whatever his previous accomplishments, the beginning resident is viewed - by himself and others - simultaneously as an expert and a novice." The second stage of the early phase is rebellion. The extent of the rebellion and the forms it takes vary considerably."

Worby did not describe what he saw as the succeeding phases in the development of the resident as a psychiatrist, but he related that, "commonly, the resident finds it difficult to form an image of himself at some future end-point." The intermediate stages as well as the end-point are amorphous to the psychiatric resident.

In the study of first-year psychiatric residents done by Pasnau and Bayley (1971), they found that, "the M.M.P.I. data revealed ... a marked increase in depression in each of the residents." They remarked that, "the changes in the depression scale of the M.M.P.I. and the marked increase in skill, insight, and competency are concomitants of personality development just as the occurrence of depression in the course of psychotherapy often signals the beginning of insight and change."

Light (1979), using holistic observation, described five stages of socialization of psychiatric residency. In the first stage, the resident is actively, if subtly, discredited. The resident is told that medical training

would be an obstacle to providing good therapy, that he would have to abandon many of his hard-won professional habits and values. ..

The second stage is marked by confusion and turmoil. The resident cannot use his old tools and the psychiatric principles and procedures lack the precision of lab tests and specific therapies. His anxiety increases as he struggles to do the right thing, but he is not sure what it is.

The third stage is numbness and exhaustion. It may be perceived by others as a slump. This stage is characterized by cynicism and what appears to be an attitude of not caring by the residents - apathetic fatigue. "Psychologically, the period of numb fatigue is a turning point, the end of resistance put up by the old values and ways against the new."

Renewal is the fourth stage. The resident begins to discover that there is a way to make sense of his new task. "There are techniques that work and values that make sense." "The stage of renewal is the crucible of socialization, the period when students assimilate the program's techniques and values into a new professional identity." "Role playing is a crucial part of this fourth stage." "The more residents acted as if they were

psychiatrists, the less false it seemed, particularly when patients and supervisors took their performance seriously."

The fifth and final stage of the socialization of the psychiatric resident is self-affirmation. "As bonds of identification strengthened and individuals gained confidence, they began to wean themselves from those on whom they had depended." "Increasingly, they attributed to themselves a sense of mastery."

Summary

Within the small number of accounts by RNs who had completed their BSN presented in this report, there are some similarities. There seemed to be much resistance to the necessity of validating nursing knowledge gained outside of the BSN program for the granting of college credit. The vital role played by support persons in the RN's experiences of returning to school were pointed out. Most of the RNs could identify what could be termed a "turning point," when the whole process of the BSN began to be positive for them. Only one of the RNs related specific stages/phases she felt she passed through during her educational experience. The common outcome of the BSN for these nurses seemed to be breadth - in nursing and in their personal lives.

The two groups of students, who looked back on their experiences in a RN/BSN program, saw themselves as passing through definite phases/stages. Both sets of phases/stages included a negative phase/stage before the final positive stages/phases. The final phase/stage, for both groups of students, was one in which they realized they were different in the way they viewed nursing than when they began the BSN program.

Several of the faculty members, who had worked with RN students, also described phases/stages they felt the RN students had passed through during the completion of the BSN. Again, at least one of these phases/stages was a negative one with strong emotional feelings. The final phase/stage was one in which their view of and/or practice of nursing had changed.

The 23 research studies reviewed used a diversity of subjects and tools for data collection. At least 14 different subject groups were used and 24 different tools were used for data collection. The most frequently used subject groups were entering and exiting RN/BSN students (used in nine studies). About half of the time these were the same subjects on entry and at exit from the BSN program. The next most frequent subject groups were generic basic BSN students and RN/BSN students (used in six

studies). In four of the studies, these were exiting students, and in two of the studies, the students were at various points in the BSN program.

When the subjects were the same entering and exiting RN/BSN students (Little & Brian, 1982; Leddy, 1982; Holzemer, Anderson, Weiss, & Slichter, 1983; Sullivan, 1984), in all studies except one (Holzemer, Anderson, Weiss, & Slichter) the subjects made at least some changes that were indirectly or directly indicative of a move toward professionalization. The study by Hogle (1982) used the same subjects but only followed them through the midpoint of their nursing courses. She also found changes compatible with professionalization. When the subjects were cohort entering and exiting RN/BSN students (Hogan, 1972; Hunter, 1985; Soefje, 1985; Blicharz, 1985), all of the studies concluded that the RN students had made changes, at least in part, indicative of professionalization.

When the studies contrasted basic generic BSN graduating students with RN/BSN graduating students (Hogan, 1972; Corona, 1973; Bullough & Sparks, 1975; Hunter, 1985), no differences were found between the two groups in the area of professionalism. When the studies contrasted basic generic BSN students with RN/BSN students at various levels in their programs (Bullough, 1979; Baj, 1983), there was no

difference found between the groups in the level of role strain and stress they experienced and the RN/BSN students were found to be more care oriented than the basic generic BSN students.

When the studies used as subjects RN/BSN students who were one year into the program (Wilson, Vaughan, & Gaff, 1977; Notter & Robey, 1979), there was found evidence of a new professional role. Interestingly, ADN/BSN students showed more change than Diploma/BSN students. The two studies that used RN/BSN students at various levels in their programs (Hillsmith, 1978; Smullen, 1982,1983) also found evidence of behaviors in the subjects consistent with professional practice.

All of the studies except two (Wilson & Levy, 1978; Ipock, 1982) used as subjects students in BSN programs. Wilson & Levy studied students who had left the program and identified factors in attrition. Ipock's subjects were faculty members who had experience with RN/BSN students.

None of the studies reviewed attempted to document the stages/phases that others had recounted that RN students experience during the BSN program. Hogle (1982) did identify stages/phases experienced by a small sample of RN students up to the midpoint of their program. She used retrospective open-ended interview questions with four

senior RN/BSN students in one program. Ipock (1982) documented, from the faculty's perspective, the existence of one stage, anger. Hillsmith (1978) documented, from the RN students' perspective, also, the presence of frustration and anger. Smullen (1983) used non-participant observation and interviews with 122 RN students in eleven nursing courses over a period of fifteen weeks to gain insight into the public and private lives of RN students. She identified processes in the classroom, but some of the stages/phases previously described can be recognized.

Of the 24 tools used to gather data, most of them (14) dealt with some form of professionalization. The most frequently used single tool was Corwin's Nursing Role Conception Scale. It was used in three studies (Notter & Robey, 1979; Hunter, 1985; Blicharz, 1985). The rest of the tools used dealt with a variety of factors that could be linked indirectly to gaining of a professional role perspective by the RN students. The most frequently used of these tools was the Omnibus Personality Inventory. It was used in three studies (Gortner, 1968; Little & Brien, 1982; Holzemer, Anderson, Weiss, & Slichter, 1983). Of the non-objective tools used, the interview was the most prevalent. It was used in three studies (Wilson &Levy, 1978; Hogle, 1982; Smullen, 1982, 1983).

In conclusion, the research on RN/BSN students seems to indicate that these students do change as a result of the BSN program. These changes are, at least in part, an indication of a move toward a professional role. Also, when RN/BSN students are compared with basic generic BSN students, they evidence the same level of professionalism attained by the basic generic BSN students. It seems the BSN programs for RNs educated in technical programs have been successful in their goals and objectives.

Because of the seeming uniqueness of the RN student's position as a student in a program that prepares practitioners for the license that she already holds, an attempt was made to find students in other fields who might have experiences similar to those of the RN student. Malkemes (1974) described the resocialization of the nurse to the nurse practitioner role. But this took place at the master's level and not in a program at the beginning entry level into nursing. However, the basic concept of role change was at work. The phases in this role change were not unlike those described by faculty of RN/BSN programs.

But it seems that the resocialization of the physician to psychiatrist may be nearer to what the RN student experiences. Several papers were reviewed that described this process. One paper was written by a psychiatric

resident about his own experience (Klagsbrun, 1967). He saw himself undergoing a transition to a professional identity and identified three stages in the transition. Three faculty who worked with psychiatric residents (Merklin & Little, 1967; Worby, 1970) speculated on the stages that they felt the residents passed through. Merklin and Little looked at the process as developmental and Worby looked at it as an identity crisis. Two studies on the experiences of psychiatric residents were reviewed (Pasnau & Bayley, 1971; Light, 1979). One used an objective tool and the other used wholistic observations. Both studies identified stages that the psychiatric resident experiences but Light's study was the most comprehensive. It is the subtle discrediting that the resident feels at the beginning of the residency that seems to most describe what the RN student feels as she enters the nursing courses. The stages described for the resocialization of the psychiatric resident also included a negative stage before the positive ones that signaled that a role change had occurred.

The comparison of the stages/phases in resocialization, presented in this review of the literature, by selected observers is presented in Table 1.

Table 1

Comparison of Stages/Phases in Resocialization

Brainard (1983)	Higgins and Wolfarth (1980)	Twelve RN Students (1980)	Woolley (1978)
Stagnation(1)			
	Honeymoon(1)		
Internal(2) conflict	Shock and rejection/ hostility, anger and fear(2)	Emotional turmoil (1)	Tension, anxiety/ resistance(1)
Intimidation(3)			
Bitterness(4)		Silent, angry compliance(2)	
Feeling lost(5)		Helpless(3)	
	Recovery/ humor and less tension(3)	Willing to take risks(4)	More relaxed(2)
		Concern with new professional identity(5)	
Insight(6)		Feeling that new RN/BSN identity fit(6)	Acceptance of new perspective(3)

*Number in parentheses corresponds to stage/phase number given by author

Table 1 (continued)

Comparison of Stages/Phases in Resocialization

Shane (1980)	Hogle (1982)	Malkemes (1974)	Klagsbrun (1967)
	Lack of self-Actualization(1)		
Honeymoon(1)	Motivation(2)	Motivated(1)	Uncritical acceptance(1)
Conflict/ Depression(2)	Frustration/ anger and depression(3)	Role crisis/ anxiety, frustration, negativism, striking out(2)	Cynical disbelief(2)
	Controlled stress(4) Tolerated/ relevant stress(5) Growth(6)		
Bicultura-lism(3)		Independence, comfort in new role(3)	Integrated approach(3)

Table 1 (continued)

Comparison of Stages/Phases in Resocialization

Merklin and Little(1967)	Worby (1970)	Pasnau and Bayley(1971)	Light (1979)
Prodrome(1)	Receptivity(1)		
Reaction(2)	Rebellion(2)	Depression(1)	Discrediting(1) Confusion and turmoil(2) Numbness and exhaustion(3)
		Marked increase in skill, insight and competency(2)	Renewal(4)
Resolution(3)			Self-affirmation(5)

CHAPTER III

METHOD

Research Questions

This study sought to answer the following questions:

1. Do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses?

2. Do RN students in a BSN program taking nursing courses evidence more role strain at each of four time points during a term than those taking non-nursing courses?

3. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different across four time points during the term?

4. For RN students in a BSN program taking nursing courses, is the amount of role strain different across four time points during the term?

5. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different for time point one and time point four during the term?

6. For RN students in a BSN program taking nursing courses, is the amount of role strain different for time point one and time point four during the term?

7. For RN students in a BSN program taking non-nursing courses, is there a pattern to role strain across the four time points during the term?

8. For RN students in a BSN program taking nursing courses, is there a pattern to role strain across the four time points during the term?

9. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses?

10. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

11. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective at each of four time points during a term than those taking non-nursing courses?

12. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different across four time points during the term?

13. For RN students in a BSN program taking nursing courses, is their nursing role perspective different across four time points during the term?

14. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different for time point one and time point four during the term?

15. For RN students in a BSN program taking nursing courses, is their nursing role perspective different for time point one and time point four during the term?

16. For RN students in a BSN program taking non-nursing courses, is there a pattern to their nursing role perspective across the four time points during the term?

17. For RN students in a BSN program taking nursing courses, is there a pattern to their nursing role perspective across the four time points during the term?

18. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

19. With the role strain variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

Definition of Terms

RN student: A graduate of either a Diploma in Nursing or an ADN program, who is registered as a Professional Nurse by the Department of Registration and Education of the state of Illinois, and enrolled in a program leading to a BSN in a college or university.

BSN program: A program of study in a college or university which leads to a bachelor of science with a major in nursing. The nursing courses, which are at the upper division, are built on a base of liberal education.

Non-nursing course: All courses that do not constitute the courses in the major area of nursing. They include general education courses, prerequisite courses to the nursing courses, and electives in areas other than the nursing major.

Nursing course: Those courses that constitute the nursing major. They are designated as nursing courses in the school catalogue and are taught by nursing faculty. They may be either theoretical, clinical, or a combination of theoretical and clinical in nature and content.

Role strain: A subjective internal response. It is the feeling of difficulty and distress in meeting role obligations. It may be felt as tension, anxiety, frustration, anger, hostility, apathy, depression, or futility (Hardy, 1978, pp. 73, 92). Role strain results from role stress. Role stress is external to the individual. It results from role obligations being "...vague, irritating, difficult, conflicting, or impossible to meet" (Hardy, 1978, p. 76). For the purposes of this study, role strain is the score obtained on each of three scales: the State form of Spielberger's "State Trait Anxiety Inventory" (STAI), Buss-Durkee's "Hostility Inventory," and Berndt's "Multiscore Depression Inventory" (MDI).

Nursing role perspective: Covertly, how one defines or describes oneself as a nurse. What one feels is appropriate behavior for a nurse. What one perceives to be one's rights and obligations as a nurse (Corwin & Taves, 1962; Gullahorn, 1956; Shaw & Costanzo, 1970, p. 334). For the purposes of this study, nursing role perspective is the score obtained on each of four scales: the three sub-scales (Professional, Bureaucratic, and Service) of "Opinions About Nursing" and Bullough, Spark, and Dunworth's "Nursing Orientation toward Care or Cure Scale".

Term: A period of time in an academic calendar that designates the beginning and ending of courses. It may be a semester, a quarter, or a trimester. A semester or trimester is usually 15 weeks in length and a quarter or term is usually 10-11 weeks in length.

Subjects

The subjects were 97 RN students enrolled in eight different BSN programs in the greater Chicago area. Those

taking non-nursing courses numbered 47. Those taking nursing courses numbered 50. All of the subjects were females except for two males who were taking nursing courses. Those taking non-nursing courses were from two different BSN programs and those taking nursing courses were from seven different BSN programs. In one BSN program some subjects were taking non-nursing courses and some were taking nursing courses.

The subjects were in a variety of educational institutions. They were in private, denominational, and state supported institutions. The institutions ranged in size from small to large enrollments of students. In some institutions, the BSN program was open only to RN students and in others it was open to basic generic students as well as RN students. In most of the institutions, the BSN program was accredited by the National League for Nursing. The institutions had a variety of time periods for their academic calendar. A description of the institutions in which these BSN programs were offered can be found in Appendix A, I and A, II.

Most of the subjects taking non-nursing courses (35 or 74.5%)were in institution #9. The other subjects taking non-nursing courses (12 or 25.5%) were in institution #10. The subjects taking nursing courses were quite well distributed among the seven institutions: 9 or 18% in #1; 10

or 20% in #2; 4 or 8% in #3; 8 or 16% in #5; 9 or 18% in #6; 9 or 18% in #7; and 1 or 2% in #12 (see Table 2).

Table 2

Number and Percentage of Subjects By Type of Course From Each Educational Institution

	Subjects	
Institution	Non-Nursing Courses	Nursing Courses
#1		9 (18%)
#2		10 (20%)
#3		4 (8%)
#5		8 (16%)
#6		9 (18%)
#7		9 (18%)
#9*	35 (74.5%)	
#10	12 (25.5%)	
#12		1 (2%)

*Same institution as #6 but taking non-nursing courses

All of the subjects taking non-nursing courses were in basic generic BSN programs which admitted RN students. The subjects taking nursing courses were quite well distributed between those basic generic BSN programs which admitted RN students, 21 or 42%, and those that only admitted RN students, 29 or 58% (see Table 3).

All of the subjects taking non-nursing courses were in institutions where the BSN program was accredited by the National League for Nursing. Of those subjects taking

Table 3

Number and Percentage of Subjects by Type of Course and by Type of BSN Program

BSN Program	Subjects	
	Non-Nursing Course	Nursing Course
RN Only		29 (58%)
RN in Generic	47 (100%)	21 (42%)

nursing courses, 18 or 36% were in BSN programs that were not as yet accredited by the National League for Nursing and 32 or 64% were in programs that were accredited. All of those subjects, in BSN programs that were not as yet accredited by the National League for Nursing, were in BSN programs that admitted only RN students (see Table 4).

Most of the subjects taking non-nursing courses (35 or 74.5%) were in institutions with a semester or trimester academic calendar. The rest were in institutions with either a quarter or term academic calendar, 12 or 25.5%. The subjects taking nursing courses were quite well dispersed between institutions with semester or trimester academic calendars, 29 or 58%, and those with quarter or term academic calendars, 21 or 42% (see Table 5).

Table 4

Number and Percentage of Subjects by Type of Course and by Status of Accreditation

	Subjects	
	Non-Nursing Courses	Nursing Courses
Status		
Accredited	47 (100%)	32 (64%)
Not Accredited		18 (36%)

Table 5

Number and Percentage of Subjects by Type of Course and by Academic Calendar

	Subjects	
	Non-Nursing Courses	Nursing Courses
Academic Calendar		
Semester/ Trimester	35 (74.5%)	29 (58%)
Quarter/ Term	12 (25.5%)	21 (42%)

The subjects taking non-nursing courses were enrolled in a variety of general education and pre-requisite courses(see Appendix B, I and B, II for the number and type of courses for subjects in each institution). The subjects taking nursing courses were either taking their first theoretical nursing course, their first nursing course with a clinical component, or their first nursing course, which

contained both theoretical and clinical components. Appendix B, III contains the type of nursing course each institution offered to subjects who were taking nursing courses and a description of the course. Subjects in institution #6 were taking either their first nursing course with a clinical component or their first nursing course with a theoretical component. In some institutions subjects were taking co-requisite nursing courses. These are indicated in Appendix B, III.

Of the subjects taking nursing courses, 19 or 38% were taking their first theoretical nursing course, 23 or 46% were taking their first nursing course with a clinical component, and 8 or 16% were taking their first nursing course, which included both a theoretical and clinical component (see Table 6).

Some of the subjects taking non-nursing courses had previously completed a nursing course, 9 or 19.1% of the subjects. Most of the subjects taking non-nursing courses had completed no prior nursing courses, 38 or 80.9% of the subjects. Most of the subjects taking nursing courses had taken no prior nursing courses; they were taking their first nursing course, 26 or 52% of the subjects. For those subjects who had completed prior nursing courses, the most frequent number of prior nursing courses they had completed

was three. The number of subjects who had completed other numbers of prior nursing courses is detailed in Table 7. These nursing courses could have been theoretical or clinical in nature.

Table 6

Number and Percentage of Subjects by Type of Nursing Course

Type of Nursing Course	Subjects
First Theory	19 (38%)
First Clinical	23 (46%)
First, Theory and Clinical	8 (16%)

Table 7

Number and Percentage of Subjects by Type of Course and by Number of Prior Nursing Courses Completed

Number of Prior Nursing Courses	Subjects Non-Nursing Course	Nursing Course
None	38 (80.9%)	26 (52%)
One	9 (19.1%)	5 (10%)
Two		6 (12%)
Three		8 (16%)
Four		4 (8%)
Five		1 (2%)

Most of the subjects taking non-nursing courses were attending class in the evening, 40 or 85.1%. The rest of the

subjects taking non-nursing classes were attending class during the day, 7 or 14.9%. The subjects taking nursing classes were more evenly distributed between classes in the evening, 29 or 58%, and classes during the day, 21 or 42% (see Table 8).

Table 8

Number and Percentage of Subjects by Type of Course and by Time of Class

	Subjects	
Time of Class	Non-Nursing Course	Nursing Course
Evening	40 (85.1%)	29 (58%)
Day	7 (14.9%)	21 (42%)

Most of the subjects taking non-nursing courses were part-time students, 45 or 95.7%, and the rest were full-time students, 2 or 4.3%. Most of the subjects taking nursing courses were also part-time students, 37 or 74%, with the remaining being full-time students, 13 or 26% (see Table 9).

Most of the subjects taking non-nursing courses were employed full-time, 38 or 80.9%, and the rest were employed part-time, 9 or 19.1%. Most of the subjects taking nursing courses were also employed full-time, 30 or 60%, with 16 or 32% employed part-time, and 4 or 8% unemployed (see Table 9).

Most of the subjects taking non-nursing courses, 39 or 83%, and nursing courses, 32 or 64%, were staff nurses. For the subjects taking non-nursing courses, the number of subjects in other positions, in decreasing frequency, were: entry level manager/charge nurse, 2 or 4.3%; first line manager/head nurse, 2 or 4.3%; supervisor, 2 or 4.3%; executive/director of nursing, 1 or 2.1%; and independent nurse practitioner, 1 or 2.1%. For subjects taking nursing courses, the number of subjects in other positions, in decreasing frequency, were: entry level manager, 5 or 10%; unemployed, 4 or 8%; first line manager, 3 or 6%; middle manager/clinical director, 3 or 6%; independent nurse practitioner, 3 or 6% (see Table 10).

Table 9

Number and Percentage of Subjects by Type of Course and by Student and Employment Status

	Subjects	
Status	Non-Nursing Course	Nursing Course
Student		
part-time	45 (95.7%)	37 (74%)
full-time	2 (4.3%)	13 (26%)
Employment		
none		4 (8%)
part-time	9 (19.1%)	16 (32%)
full-time	38 (80.9%)	30 (60%)

Table 10

Number and Percentage of Subjects by Type of Course and by Nursing Position Held

Nursing Position	Subjects	
	Non-Nursing Course	Nursing Course
Unemployed		4 (8%)
Staff Nurse	39 (83%)	32 (64%)
Entry Level Manager	2 (4.3%)	5 (10%)
First Line Manager	2 (4.3%)	3 (6%)
Supervisor	2 (4.3%)	
Middle Manager		3 (6%)
Executive	1 (2.1%)	
Independent Practitioner	1 (2.1%)	3 (6%)

More of the subjects taking nursing courses had changed their employment position in nursing since going back to school, 25 or 50%, than those subjects who were taking non-nursing courses, 17 or 36.2%. More of those subjects not changing their position since going back to school were taking non-nursing courses, 30 or 63.8%, rather than nursing courses, 25 or 50% (see Table 11).

The subjects were employed in a variety of clinical areas in nursing. The four most frequent areas, for those subjects taking non-nursing courses, were: intensive care, 8 or 17%; medical-surgical, 7 or 14.9%; diverse areas or float nurse, 5 or 10.6%; and geriatrics. 5 or 10.6%. The other

Table 11

Number and Percentage of Subjects by Type of Course and by Status of Position Change Since Returning to School

Change in Nursing Position	Subjects	
	Non-Nursing Course	Nursing Course
No	30 (63.8%)	25 (50%)
Yes	17 (36.2%)	25 (50%)

areas that subjects taking non-nursing courses were employed in are detailed in Table 12. The four most frequent areas that subjects, who were taking nursing courses, were employed in were: intensive care, 8 or 16%; medical-surgical, 8 or 16%; emergency room, 6 or 12%; and community health, 5 or 10%. The other areas of nursing that subjects taking nursing courses were employed in are detailed in Table 12.

Most of the subjects taking non-nursing courses had graduated from Diploma nursing programs, 30 or 63.8%, but most of the subjects taking nursing courses had graduated from ADN programs, 34 or 68%. There were 17 or 36.2% of the subjects taking non-nursing courses who had graduated from ADN programs and 16 or 32% of the subjects taking nursing courses who had graduated from Diploma nursing programs (see Table 13).

Table 12

Number and Percentage of Subjects by Type of Course and by Clinical Area of Employment in Nursing

Clinical Area	Subjects	
	Non-Nursing Course	Nursing Course
Intensive Care	8 (17%)	8 (16%)
Medical/Surgical	7 (14.9%)	8 (16%)
Emergency Room	1 (2.1%)	6 (12%)
Diverse Areas	5 (10.6%)	2 (4%)
Geriatrics	5 (10.6%)	
Community Health	1 (2.1%)	5 (10%)
Unemployed		4 (8%)
Clinic		3 (6%)
Intermediate Care	3 (6.4%)	3 (6%)
Rehabilitation	2 (4.3%)	
Post-partum/Gynecology	2 (4.3%)	1 (2%)
Orthopedics	2 (4.3%)	1 (2%)
Oncology/Hematology	2 (4.3%)	1 (2%)
Dialysis	1 (2.1%)	2 (4%)
Pediatrics	1 (2.1%)	1 (2%)
Industry		1 (2%)
Special Care Nursery	1 (2.1%)	1 (2%)
Non-nursing Hospital Departments	1 (2.1%)	1 (2%)
Operating Room	1 (2.1%)	1 (2%)
I V Therapy		1 (2%)
Recovery Room	1 (2.1%)	
Delivery Room	1 (2.1%)	
Out-patient Surgery	1 (2.1%)	
Psychiatry	1 (2.1%)	

Table 13

Number and Percentage of Subjects by Type of Course and by Type of Initial Nursing Program

Initial Nursing Program	Subjects: Non-Nursing Course	Subjects: Nursing Course
Diploma	30 (63.8%)	16 (32%)
ADN	17 (36.2%)	34 (68%)

The mean age of the subjects taking non-nursing courses was 32.7 years with a mode of 24 years and a range of 39 years. The subjects taking nursing courses were slightly older with a mean age of 33.2 years and a mode of 25 years and a range of 29 years (see Table 14).

For the subjects taking non-nursing courses, it had been a mean of 9.7 years, with a mode of 3 years, since they had graduated from their initial nursing program. The subjects taking nursing courses had graduated from their initial nursing program slightly earlier, with a mean of 8 years and a mode of 4 years, since graduation from their initial nursing program (See Table 14).

The subjects taking non-nursing courses had worked slightly longer in nursing than the subjects taking nursing courses; a mean of 7.96 years with a mode of 4 years for

subjects taking non-nursing courses, as compared to, a mean of 7.2 years with a mode of 4 years for subjects taking nursing courses (see Table 14). The range in years for age, years since graduated, and years employed was greater for the subjects taking non-nursing courses than for those taking nursing courses.

Table 14

Mean, Mode, and Range of Age in Years, Years Since Graduation, and Years Employed in Nursing of Subjects by Type of Course

	Subjects	
	Non-Nursing Course	Nursing Course
Age in years		
Mean	32.7	33.2
Mode	24	25
Range	39	29
Years Since Graduated		
Mean	9.7	8
Mode	3	4
Range	40	25
Years Employed		
Mean	7.96	7.2
Mode	4	4
Range	30	20

Most of the subjects were married: 25 or 53.2% of the subjects taking non-nursing courses and 33 or 66% of the subjects taking nursing courses. Slightly more of the subjects taking nursing courses were married than those taking non-nursing courses (see Table 15). More of the subjects taking nursing courses, 29 or 58%, were parents

than those taking non-nursing subjects, 22 or 46.8% (see Table 15). The subjects taking nursing courses had slightly more children than those taking non-nursing courses: a mean of 1.4 children as compared to a mean of .9 children. Most of the subjects, whether they were taking non-nursing courses or nursing courses, had no children (see Table 16).

Table 15

Number and Percentage of Subject by Type of Course and by Status of Roles of the Subjects

	Subjects	
	Non-Nursing Course	Nursing Course
Roles		
Wife/Husband		
No	22 (46.8%)	17 (34%)
Yes	25 (53.2%)	33 (66%)
Mother/Father		
No	25 (53.2%)	21 (42%)
Yes	22 (46.8%)	29 (58%)
Roommate		
No	45 (95.7%)	48 (96%)
Yes	2 (4.3%)	2 (4%)
Significant Other		
No	31 (66%)	39 (78%)
Yes	16 (34%)	11 (22%)

Most of the children of the subjects taking non-nursing courses were in the age bracket of 11-14 years (pre-teens). Most of the children of the subjects taking nursing courses were in the age bracket of 4-11 years (school-age

children). Table 17 details the number of children in each age bracket for the subjects, by the type of course they were taking.

Table 16

Number and Percentage of Subjects by Type of Course and by Number of Children and Mean and Mode Number of Children of Subjects by Type of Course

	Subjects	
	Non-Nursing Course	Nursing Course
Number of Children		
None	25 (53.2%)	21 (42)
One	5 (10.6%)	7 (14%)
Two	14 (29.8%)	7 (14%)
Three	3 (6.4%)	8 (16%)
Four		6 (12%)
Mean	.89	1.41
Mode	.00	.00
Missing Data		1

Other roles that the subjects were engaged in were those of roommate and significant other. Very few of the subjects had the role of roommate. Only 2 or 4.3% of the subjects taking non-nursing courses had the role of roommate and only 2 or 4% of the subjects taking nursing courses had this role (see Table 15). More of the subjects taking non-nursing courses, 16 or 34%, felt that they had a role of "significant other" than the subjects taking nursing courses, 11 or 22%. Most of the subjects felt they did not have a role of "significant other" (see Table 15). The

subjects had a mean of 2.7 roles but the most frequent number of roles was greater for the subjects taking nursing courses than for those taking non-nursing courses (see Table 18).

Table 17

Number of Children of Subjects by Type of Course and by Each Age Bracket

	Subjects	
	Non-Nursing Course	Nursing Course
Age of Child		
Birth to One Year (Infant)	1	2
1-4 Years (Pre-School)	5	6
4-11 Years (School-Age)	6	12
11-14 Years (Pre-Teen)	8	10
14-18 Years (Teen-Age)	6	11
18-29 Years (Young Adult)	6	9
29-50 Years (Middle Adult)	1	0

The amount of change in their life style since returning to school was perceived to be the same by both the subjects taking non-nursing courses and those taking nursing courses (see Table 19). The amount of support for returning

Table 18

Number and Percentage of Subjects by Type of Course and by Number of Roles and Mean and Mode Number of Roles for Subjects by Type of Course

	Subjects	
	Non-Nursing Course	Nursing Course
Number of Roles		
One	2 (4.3%)	4 (8%)
Two	20 (42.6%)	17 (34%)
Three	20 (42.6%)	20 (40%)
Four	3 (6.4%)	8 (16%)
Five	1 (2.1%)	1 (2%)
Six	1 (2.1%)	
Mean	2.7	2.7
Mode	2.0	3.0

Table 19

Number and Percentage of Subjects by Type of Course for Each Degree of Life Style Change Since Returning to School and Mean and Mode of Life Style Change for Subjects by Type of Course

	Subjects	
	Non-Nursing Course	Nursing Course
Life Style Change		
Not at all =1	1 (2.1%)	1 (2%)
A little =2	10 (21.3%)	10 (20%)
Somewhat =3	10 (21.3%)	11 (22%)
Quite a bit =4	20 (42.6%)	20 (40%)
Drastically =5	6 (12.8%)	7 (14%)
Mean	3.4	3.4
Mode	4.0	4.0
Missing Data		1 (2%)

to school that both the subjects taking non-nursing courses and those taking nursing courses felt was greatest from their family, next greatest from their friends , and least from their work peers (see Table 20). Those subjects taking

Table 20

Number and Percentage of Subjects by Type of Course for Each Degree of Support from Family, Friends, and Work Peers and Mean and Mode Support of Subjects by Type of Course and By Source of Support

	Subjects	
	Non-Nursing Course	Nursing Course
Source and Degree of Support		
Family		
None =1		2 (4%)
A little =2	6 (12.8%)	8 (16%)
Pretty much =3	7 (14.9%)	15 (30%)
A lot =4	34 (72.3%)	25 (50%)
Mean	3.6	3.3
Mode	4	4
Friends		
None =1	1 (2.1%)	5 (10%)
A little =2	11 (23.4%)	14 (28%)
Pretty much =3	27 (57.4%)	17 (34%)
A lot =4	7 (14.9%)	13 (26%)
Mean	2.8	2.7
Mode	3	3
Missing Data	1 (2.1%)	1 (2%)
Work Peers		
None =1	5 (10.6%)	5 (10%)
A little =2	18 (38.3%)	21 (42%)
Pretty much =3	11 (23.4%)	10 (20%)
A lot =4	12 (25.5%)	11 (22%)
Mean	2.6	2.4
Mode	2	2
Missing Data	1 (2.1%)	3 (6%)

non-nursing courses felt more support from their family, friends, and work peers than those taking nursing courses (see Table 20).

The strongest motivator for both the subjects taking non-nursing courses, 14 or 29.8%, and those taking nursing courses, 23 or 46%, to return to school was "to increase knowledge, understanding, and self-development." This was a stronger motivator in the group of subjects taking nursing courses. The next most frequent, strongest motivator, to return to school for the subjects taking non-nursing courses was "to advance with the profession," 12 or 25.5%. For the subjects taking nursing courses it was "to comply with the future entry into practice requirement," 8 or 16%. The third most frequent, strongest motivators, to return to school were the same as the second most frequent, but reversed for the subjects: for the subjects taking non-nursing courses it was "to comply with the future entry into practice requirement," 8 or 17%, and for those taking nursing courses it was "to advance with the profession," 6 or 12%. None of the subjects identified as their strongest motivator to return to school "to get a job with more convenient hours" or "to increase opportunity for close contact with patients." The frequency of the other motivators for the subjects are detailed in Table 21.

Table 21

Number and Percentage of Subjects by Type of Course for Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	14 (29.8%)	23 (46%)
To advance with the profession	12 (25.5%)	6 (12%)
To comply with the future entry into practice requirement	8 (17.0%)	8 (16%)
To get a better paying job	4 (8.5%)	1 (2%)
To get more prestige	1 (2.1%)	3 (6%)
To develop a habit of continued self-education	3 (6.4%)	1 (2%)
To get a job with more individual responsibility	1 (2.1%)	1 (2%)
To participate in nursing research		1 (2%)
To get a job with more convenient hours		
To increase opportunity for close contact with patients		
Other reasons	2 (4.3%)	4 (8%)
None specified	2 (4.3%)	2 (4%)

The second strongest motivator to return to school, for the subjects taking non-nursing courses, was "to increase knowledge, understanding, and self-development," 11 or 23.4%. For the subjects taking nursing courses, it was "to advance with the profession," 11 or 22%. The next most frequent, second strongest motivator, to return to school, for the subjects taking non-nursing courses, was "to advance with the profession," 10 or 21.3%. For those taking nursing

courses, it was "to comply with the future entry into practice requirement," 9 or 18%. The third most frequent, second strongest motivator, to return to school, for the subjects taking non-nursing courses, was "to comply with the future entry into practice requirement," 8 or 17%. For those taking nursing courses, it was "to get a job with more individual responsibility," 8 or 16%. The frequency of the subjects identifying the other motivators is detailed in Table 22.

There were three motivators that the subjects taking non-nursing courses identified most frequently as their third strongest motivator for returning to school: "to increase knowledge, understanding, and self-development," "to comply with the future entry into practice requirement," and "to advance with the profession," 7 or 14.9% for each motivator. For the subjects taking nursing courses, it was "to advance with the profession," 9 or 18%. The next most frequent, third strongest motivator, to return to school, for the subjects taking non-nursing courses, was three motivators: "to get a better paying job," "to develop a habit of continued self-education," and "to get a job with more individual responsibility," 4 or 8.5% for each motivator. For the subjects taking nursing courses, it was "to increase knowledge, understanding, and self-development" and "to get a job with more individual responsibility," 7 or

Table 22

Number and Percentage of Subjects by Type of Course for Second Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	11 (23.4%)	5 (10%)
To advance with the profession	10 (21.3%)	11 (22%)
To comply with the future entry into practice requirement	8 (17%)	9 (18%)
To get a better paying job	2 (4.3%)	5 (10%)
To get more prestige	1 (2.1%)	2 (4%)
To develop a habit of continued self-education	5 (10.6%)	4 (8%)
To get a job with more individual responsibility	3 (6.4%)	8 (16%)
To participate in nursing research		
To get a job with more convenient hours	3 (6.4%)	1 (2%)
To increase opportunity for close contact with patients	1 (2.1%)	1 (2%)
Other reasons		1 (2%)
None specified	3 (6.4%)	3 (6%)

14% for each motivator. The third most frequent, third strongest motivator, to return to school, for the subjects taking non-nursing courses, was shared by two motivators: "to get a job with more convenient hours" and "to increase opportunities for close contact with patients," 3 or 6.4% for each motivator. For the subjects taking nursing courses, it was "to comply with the future entry into

practice requirement" and "to develop a habit of continued self-education," 6 or 12% for each motivator. The frequency of the subjects identifying the other motivators is detailed in Table 23. The frequency of the subjects identifying their fourth, fifth, sixth, seventh, eighth, ninth, tenth, and eleventh strongest motivators for returning to school can be

Table 23

Number and Percentage of Subjects by Type of Course for Third Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	7 (14.9%)	7 (14%)
To advance with the profession	7 (14.9%)	9 (18%)
To comply with the future entry into practice requirement	7 (14.9%)	6 (12%)
To get a better paying job	4 (8.5%)	4 (8%)
To get more prestige	1 (2.1%)	1 (2%)
To develop a habit of continued self-education	4 (8.5%)	6 (12%)
To get a job with more individual responsibility	4 (8.5%)	7 (14%)
To participate in nursing research	2 (4.3%)	1 (2%)
To get a job with more convenient hours	3 (6.4%)	1 (2%)
To increase opportunity for close contact with patients	3 (6.4%)	
Other reasons		2 (4%)
None specified	5 (10.6%)	7 (14%)

found in Appendix C. The "Other reasons" given as motivators with their ranking by subjects taking non-nursing courses and those taking nursing courses can be found in Appendix C, IX.

The subjects taking nursing courses had earned slightly more continuing education units (CEUs) in the last year than those subjects taking non-nursing courses, a mean of 10.9 CEUs as compared to 9.3 CEUs for the subjects taking non-nursing courses. Twelve or 25.5% of the subjects taking non-nursing courses had earned no CEUs in the last year and 18 or 36% of the subjects taking nursing courses had also earned no CEUs in the last year. Ten or 21.3 of the subjects taking non-nursing courses did not answer the question about CEUs; this was true for only 4 or 8% of the

Table 24

Information on CEUs Earned in the Past Year for Subjects by Type of Course

	Subjects	
	Non-Nursing Course	Nursing Course
Number of CEUs in Last Year		
None	12 (25.5%)	18 (36%)
No Response	10 (21.3%)	4 (8%)
Mean	9.3	10.9
Mode	0	0
Range	52	60

subjects taking nursing courses (see Table 24).

The information to describe the subjects was gathered using a Demographic Data form, which can be found in Appendix D, III and D, IV.

Informed Consent Procedure

The subjects consented to voluntarily participate in the study, without remuneration, after having it verbally explained to them and/or being provided with a written description of the study and what would be expected of them as a participant (see Appendix D, I for "Letter to RN Students"). In institutions # 9, 10, and 12, the names and addresses of potential subjects were obtained from the Dean of the nursing program and the "Letter to RN Students" was sent directly to their home address. In institutions #2 and 3 the instructor provided the students with the "Letter to RN Students." In institutions #4 and 11 the "Letter to RN Students" was not made available to the potential subjects. In institutions #1, 5, 6, 7, and 8, the study was verbally explained to the potential subjects by the investigator. The verbal explanation covered the material outlined in the "Letter to RN Students." They were given the opportunity to ask questions. Their consent to participate assured them of

anonymity in the written report of the study and confidentiality of their responses to the materials used in the study. Their instructors would not know who had consented to be a participant in the study. They were informed that they were free to withdraw from the study at any time, if they so desired, after consenting to participate. At the completion of the study, they would be provided with a summary of the study, if they so desired.

With the verbal and/or written explanation of the study, the potential subjects were provided with a consent form (see Appendix D, II for "Agreement to Participate"). If they agreed to participate in the study, they were asked to return the signed consent form in the self-addressed, stamped envelope provided.

Materials

A Demographic Data form was constructed and used to gather data on attribute variables that were identified from the literature as having some possible relationship to the variables of interest in this study (see Appendix D, III and D, IV for the Demographic Data form). The section in the Demographic Data form on the reasons for the subject's return to school was adapted from Brodt's College-Bound -

But Why scale (1969), with her permission. A copy of this instrument can also by found in Ward and Fetler's Instruments for Use in Nursing Education Research (1979, pp. 104-106).

To gather information on the presence of role strain in these subjects, which should be present if role change were taking place, three methods were used. Three scales were used to objectively collect data on three emotional states that should indicate the presence of role strain: anxiety, hostility, and depression. The second method was an open-ended question to elicit the emotional evidence of role strain. The third method was a telephone interview in which structured questions were asked to elicit the experience of role strain by the subject.

The scale used to objectively collect data on the presence of anxiety in the subjects was the State-Trait Anxiety Inventory (STAI Form X-1, state anxiety, A-State). This scale was developed by Spielberger, Gorsuch, and Lushene (1970). "State anxiety (A-State) is conceptualized as a transitory emotional state or condition of the human organism that is characterized by subjective, consciously, perceived feelings of tension and apprehension, and heightened autonomic nervous system activity. A-States may vary in intensity and fluctuate over time" (p. 3). The STAI

Form X-1 was "originally developed as a research instrument for investigating anxiety phenomena in 'normal'...adults" (p. 3). It can be used to measure changes in state anxiety in a situation. "To measure changes in A-State intensity over time, it is recommended that the STAI A-State scale be given on each occasion for which a measure of A-State is needed" (p. 4).

The STAI Form X-1 is self-administered and may be given to individuals or groups. It consists of 20 statements which ask the subjects to indicate how they feel at a particular moment in time. "The validity of the STAI rests upon the assumption that the examinee has a clear understanding of the 'state' instructions which require him to report how he feels at this moment...." (p. 4). "Subjects respond to each STAI item by rating themselves on a four-point scale..." from one to four, from "not at all" to "very much so" (p. 4) (See Appendix D, V for items of the STAI Form X-1, A-State, and categories of rating). No time limit is set for responding to the items in the scale. Its completion usually requires only six to eight minutes. Repeated administration usually requires five minutes or less (p. 4). Scoring of the scale is detailed in Appendix D, VII. "The instructions may be modified to evaluate the level of A-State intensity for any situation or time interval that is of interest...." "The precise period for which the

subjects' A-State responses are desired should be emphasized in the instructions" (p. 4). For purposes of this study, the instructions were modified (see Appendix D, VI for modified instructions).

The A-State scale has a high degree of internal consistency (p. 10). Normative data for the STAI (A-State) was collected for undergraduate college students: 484 undergraduate students (253 males, 231 females) at Florida State University (p. 5). The mean scores, standard deviation and alpha reliabilities for males and females respectively were: 36.35 and 35.12, 9.67 and 9.25, .89 and .89 (p. 8).

> Further evidence of the internal consistency of the STAI [A-State]...is provided by the item-remainder correlations computed for the sample of ... college students. The median A-State item-remainder correlation was... .55 for the college undergraduates. For over half of the items on each scale, the item-remainder correlations were .50 or higher; ...18 of the 20 A-State items, had item-remainder correlations of .30 or above (p. 10).

Both alpha reliabilities correlations and item-remainder correlation coefficients are higher when the A-State is given under more stressful conditions. "The STAI A-State scale includes items at various levels of item-intensity specificity so that it may be used over a wide range of A-State intensities" (p. 11).

The STAI X-1's "...content, concurrent and construct validity compare favorably with other published tests of

anxiety" (Spielberger, Gorsuch, & Lushene, 1970, p. 9). The test-retest reliability data on the STAI (A-State) for undergraduate college students retested after one hour was .33 for males and .16 for females. During the hour interval before the retest the students were successively exposed to the following:

> a brief period of relaxation training; a difficult IQ test; and a film that depicted accidents resulting in serious injury or death. The low r's...were anticipated, of course, because a valid measure of A-State should reflect the influence of unique situational factors existing at the time of testing. Given the transitory nature of anxiety states, measures of internal consistency such as the alpha coefficient would seem to provide a more meaningful index of the reliability of A-State scales than test-retest correlations (p. 9).

Spielberger, Gorsuch, and Lushene (1970) report that the construct validity of the A-State scale was demonstrated with a sample of 977 undergraduate college students at Florida State University (p. 10).

> These students were first administered the A-State scale with the standard instructions (NORM condition). They were then asked to respond according to how they believed they would feel 'just prior to the final examination in an important course' (EXAM condition) (p. 10). The mean score for the A-State scale was considerably higher in the EXAM condition than in the NORM condition for both males and females. Furthermore, all but one of the items significantly discriminated between these conditions for the males, and all of the items were significantly higher in the EXAM condition for the females (p. 11).

The critical ratio for the two conditions was 24.14 and the point-biserial correlation was .60 (p. 10).

Additional validity data are provided by Spielberger, Gorsuch, and Lushene (1970) for the STAI A-State scale.

> The scale was given in a single testing session to 197 undergraduate students at Florida State University under four different experimental conditions. The first administration occurred at the beginning of the testing session (NORMAL condition); the second followed a 10-minute period of relaxation training (RELAX condition). The students were then asked to work on the Terman Concept Mastery Test, which was presented to them as 'a relatively easy I.Q. test,' and they were interrupted after 10 minutes for the third administration of the scale (EXAM condition). The final administration followed immediately after the students viewed a stressful movie (MOVIE condition) depicting several accidents in a woodworking shop.... The mean score for the A-State scale, as well as the scores for individual A-State items, were lowest in the RELAX condition and highest after the students viewed the stressful film (p. 11).

The difference between the mean scores for the A-State scale in the RELAX and NORMAL conditions, the RELAX and EXAM condition, and the RELAX and MOVIE conditions were significantly different. The critical ratios were 5.80, 9.17, and 12.10 respectively for males and 9.01, 12.22, and 22.89 respectively for females (p. 24).

> All but one of the A-State items significantly differentiated between the RELAX and MOVIE conditions for males, and ...all 20 items successfully discriminated between these conditions for females. Similarly, 18 of the 20 A-State items discriminated between the RELAX and EXAM condition for males, and 19 items did so for females. Ten A-State items significantly discriminated between the RELAX and NORMAL conditions for males, and 12 items discriminated for the females (p. 23).

Permission to reproduce the A-State scale was granted

by the publisher, Consulting Psychologists Press.

The Hostility Inventory, developed by Buss and Durkee (1957), was used to objectively collect data on the presence of hostility in the subjects of this study. The Hostility Inventory is also included by Aero and Weiner in their book The Mind Test: 37 Classic Psychological Tests You Can Now Score and Analyze Yourself! (1981, pp. 60-66). "Hostility is often the by-product of frustration and the high stress levels that frustration can produce" (Aero & Weiner, 1981, p. 65). Buss and Durkee developed the inventory to not only assess a global estimate of the intensity of hostility but to also estimate the intensity of the various subhostilities. The inventory assesses seven various aspects of hostility: assault, indirect hostility, irritability, negativism, resentment, suspicion, and verbal hostility.

The Hostility Inventory consists of 66 statement, to which the person is asked to respond by deciding if each of the statements is "true" or "false," as it pertains to them (Aero & Weiner, 1981, p. 60). Fifty-one of the statements indicate hostility if they are answered "true" and fifteen indicate hostility if they are answered "false" (Buss & Durkee, 1957). The Hostility Inventory, with instructions for its use, is displayed in Appendix D, VIII. For use in

this study, the instructions were modified (see Appendix D, IX). The directions for scoring the inventory are presented in Appendix D, X.

The items used in the Hostility Inventory meet two criteria. The first is the criterion of frequency.

> A criterion of frequency is necessary to eliminate items that are answered in one direction by virtually everyone, and it was decided to accept only items answered in one direction by 15-85% of the sample. In constructing the present inventory, an attempt was made to minimize the variable of social desirability. The hostility items were scaled for social desirability, and social desirability was correlated with probability of endorsement. The r's of .27 and .30 for college men and women, respectively, were considerably smaller than those of previous studies (Buss & Durkee, 1957).

Internal consistency was the second criterion. It

> was measured by the correlation of an item with the score of the scale in which it belonged. Since the items are scored dichotomousyly, the biserial correlation coefficient was used. The criterion for item selection was a correlation of at least .40 for both the male and female samples (Buss & Durkee, 1957).

Buss and Durkee (1957) describe the norms for the final form of the Hostility Inventory.

> The final form of the inventory was administered in group fashion to 85 male and 88 female college students. The ...[seven] scales were scored, and product-moment correlations were computed for men and women separately. None of the women's correlations, and only two of the men's correlations, are above .50, which suggests that the various scales are tapping at least partially independent behaviors. Factor analyses of college men's and women's inventories revealed two factors: an attitudinal component of hostility (Resentment and Suspicion) and a 'motor' component (Assault, Indirect Hostility, Irritability, and Verbal Hostility) (Buss & Durkee, 1957).

The total hostility means and standard deviations for men and women were 30.87 and 27.74, 10.24 and 8.75, respectively (Buss & Durkee, 1957). Aero and Weiner (1981, p. 65) state that "most people score below 38 in terms of total hostility, with women scoring slightly lower than men". The means and standard deviations, for each of the scales, for men and women, that Buss and Durkee (1957) found for the group that took the final form of the Hostility Inventory are detailed in Table 25. Aero and Weiner (1981, p. 65) state the following for high scores for each of the scales: Assault, 6 and above; Indirect Hostility, 6 and above; Irritability, 8 and above; Negativism, 4 and above; Resentment, 4 and above; Suspicion, 4 and above; Verbal Hostility, 9 and above. For the purposes of the present study, only the total hostility score was utilized.

Table 25

Mean and Standard Deviation of Men and Women College Students for Each Scale and Total of the Hostility Inventory

	Men(N=85)		No. of items	Women(N=88)	
	Mean	SD		Mean	SD
Assault	5.07	2.48	10	3.27	2.31
Indirect Hostility	4.47	2.23	9	5.17	1.96
Irritability	5.94	2.65	11	6.14	2.78
Negativism	2.19	1.34	5	2.30	1.20
Resentment	2.26	1.89	8	1.78	1.62
Suspicion	3.33	2.07	10	2.26	1.81
Verbal Hostility	7.61	2.74	13	6.82	2.59
Total Hostility	30.87	10.24	66	27.74	8.75

Permission to use and reproduce the Hostility Inventory was granted by Arnold Buss and the American Psychological Association, publisher of the inventory.

The scale used to objectively collect data on the presence of depression in the subjects was the Short Multiscore Depression Inventory (SMDI). It was developed by David Berndt

> to provide an objective measure of severity of self-reported depression. It was designed for and constructed on a normal population.... It provides more than just a global rating of depression - it gives individual and reliable scores on nine relevant subscales: guilt, irritability, pessimism, low self-esteem, cognitive difficulty, energy level (fatigue), sad mood, instrumental helplessness, and social introversion (1983, p. 1).

For purposes of this study, only the total score of the SMDI was utilized. The SMDI was developed from the full length Multiscore Depression Inventory which contains 118 items. This full length form is described in Appendix D, XIV.

The Short Multiscore Depression Inventory is a self-administered, simple paper and pencil test (Berndt, 1983, p. 13). It consists of 47 items in a true/false format (Berndt, 1983, pp. 13, 15). Eighteen of the items indicate depression if they are answered "false" and 29 indicate depression if they are answered "true." It takes about ten minutes to complete the inventory. According to

the Flesch Readability Formula, the reading ease of the inventory is at the sixth grade (Berndt, 1983, p. 14). The SMDI, with instructions for its use, is displayed in Appendix D, XI. For use in this study, the instructions were modified (see Appendix D, XII). The directions for scoring the SMDI are presented in Appendix D, XIII.

The items for the SMDI were selected from the full scale Multiscore Depression Inventory by selecting those 60 items (six from each sub-scale) that demonstrated good internal consistency. "For each of the 10 subscales, the 6 items with the highest corrected item-total correlation were selected." This 60 item form was taken by 133 students in psychology at Loyola University of Chicago and 162 students from College of Charleston in South Carolina. Then those items with the best convergent and discriminant validity were selected from these 60 items.

> Items were correlated with their own subscales (corrected by removing the item) and with all other subscales. Items that correlated higher with any of the nine other subscales than with their own subscale were eliminated. This process resulted in eliminating the Learned Helplessness scale. The result was a 47-item short form, including nine subscales (Berndt, Petzel, & Kaiser, 1983).

Concurrent validity for the subscales was demonstrated by correlation of the subscales with concurrent self-report measures. "The coefficients ranged from a low of.34 for [Social] Introversion to a high of .73 for Pessimism, all

results significant at $p < .001$. However, the magnitude of the coefficients were generally weaker than those obtained using the subscales of the long form." Concurrent validity was also demonstrated by a .68 correlation of the SMDI with the Beck Depression Inventory and a .76 correlation of the SMDI with the Depression Adjective Checklist. Both correlations are significant at $p < .001$. Also, the SMDI items were extracted from the long form of the MDI that had been completed by depressed patients and general medical patients. This resulted in a mean of 29.80 for the depressed patients and a mean of 11.69 for the general medical patients. These means are significantly different, $p=<.01$ (Berndt, Petzel, & Kaiser, 1983).

The reliability of the SMDI is evidenced by a Kuder-Richardson reliability for the subscales of between .71 and .85. The total score reliability is .92 (Berndt, Petzel, & Kaiser, 1983).

The means and standard deviations for the SMDI and each of its subscales are displayed in Table 26.

Permission to use and reproduce the Short Multiscore Depression Inventory was granted by David Berndt.

The open-ended question used to elicit role strain in the subjects of this study was: How do you feel or what is

your response/reaction, at this point in time, about going back to school and this particular course in the program (see Appendix D, XV)?

Table 26

Means and Standard Deviations of the SMDI and Each of Its Subscales (N=272)

Scale	Mean	Standard Deviation
Full Scale	11.57	8.10
Pessimism	0.90	1.50
Cognitive Difficulty	2.35	1.84
Guilt	2.45	1.95
Energy Level	1.69	2.15
Irritability	1.21	1.39
Social Introversion	1.24	1.53
Low Self-Esteem	0.77	1.33
Sad Mood	0.53	0.99
Instrumental Helplessness	0.42	0.86

The structured questions, used in the telephone interview, were designed to obtain a retrospective perspective on students' emotional reactions that might be indicative of role strain during the time of the study (see Appendix D, XVI). The following questions, preceded by the introductory statement, were asked of each subject during the telephone interview:

I'm interested in how your feelings or responses/reactions to going back to school have changed since your started this term.

1. How were you feeling at the start?

2. How are you feeling now?

3. Can you see any specific phases or stages that your feelings or responses/reactions have passed through since you started this fall term?

4. On a scale of 1-5 with 1 being "not at all" and 5 being "exactly," did you find this course to be what you expected?

5. On a scale of 1-5 with 1 being "very unclear" and 5 being "very clear," how clear to you was your role as a RN/BSN student in the clinical area? (asked only of those subjects who had taken a nursing course with a clinical component).

6. On a scale of 1-5 with 1 being "irrelevant" and 5 being "very relevant," how relevant was this course to your work situation?

Both the open-ended question and the structured interview questions were developed on the basis of information gleaned from the review of literature concerned with the problems of RNs returning to school for their BSN.

Three methods were used to gather information on the presence of resocialization in these subjects, which should be present if their perspective on nursing had changed from a technical to a professional one. Two scales were used to objectively collect data on nursing role perspective. The second method was an open-ended question to elicit the perspective of the subject on the role of the nurse. The

third method was a telephone interview in which structured questions were asked of the subject to elicit the experience of resocialization by the subject.

One of the scales used to objectively collect data on nursing role perspective was the Nursing Orientation Toward Care or Cure. This scale was developed in 1973 by Bullough and Sparks and their senior basic generic BSN students as a part of a class project for a course in role conflict (Bullough & Sparks, 1975: Ward & Fetler, 1979, p. 383).

> A body of sociological and nursing theory holds that there are two basic orientations to the nursing role: one focused on caring for patients and the other on curing their illness. The authors of this instrument hypothesized that this orientation could be measured in terms of task or work preferences in nursing (Ward & Fetler, 1979, p. 383).

They also felt that the orientations were linked to the type of educational program that prepared the nurse (Bullough & Sparks, 1975).

The Nursing Orientation Toward Care or Cure Scale consists of ten two-alternative, forced-choice items (see Appendix D, XVII for a copy of the scale). "The choices, one of which is care oriented and the other cure oriented, are tasks or work preferences in nursing" (Ward & Fetler, 1979, p. 383). For seven of the items, the cure oriented choice is presented first and for the remaining three items, the care oriented choice is presented first. The scale is

self-administered and requires five to ten minutes to complete. For purposes of this study, the instructions for completing the scale were modified (see Appendix D, XVIII). Scoring of the scale is detailed in Appendix D, XIX.

The forced-choice items of the Nursing Orientation Toward Care or Cure Scale were developed to reflect care or cure orientation as defined by the literature. Further content validity of the scale was established: "A panel of seven graduate nursing students judged the items with regard to care or cure orientation. The result of the judging was 98.5% agreement on categorization of the options" (Ward & Fetler, 1979, p. 384).

A study by Bullough and Sparks (1975) provided some data on construct validity.

> Seniors graduating in June from three randomly selected two-year nursing programs (N=201) and from the four four-year nursing programs (N=192) in the greater Los Angeles area were contacted for the study. They were asked whether the curriculum and faculty were oriented toward physiology and pathology or toward the psychosocial needs of the patient. Baccalaureate students were found to be more care oriented; associate degree students were more cure oriented. Baccalaureate curriculum and faculty were perceived as predominantly care oriented and associate degree curriculum and faculty were perceived as primarily cure oriented.

But in a later study (Spring, 1977) which covered a larger geographical area, Southern California (Orange County/Long Beach), this evidence for construct validity was not

completely corroborated. For the ADN students (N=643), 49% were cure oriented, but 51% were care oriented. For the BSN students (N=168), 50% were cure oriented, and 50% were care oriented. Associate Degree curriculums were perceived by 39% of the students as cure oriented, but by 61% as care oriented. Baccalaureate curriculums were perceived by 84% of the students as care oriented , and by only 16% of the students as cure oriented. But one must remember that these were not all graduating students, as the students were in the previous study; they were at various points in their programs (Bullough, 1979). Also the BSN students were not as well represented in this study as were the ADN students.

The alpha reliability coefficient of the Nursing Orientation Toward Care or Cure Scale is reported by Bullough (1979) to be .62 (N=1349). The following provides additional data on the reliability of the scale:

> Total scores on the inventory agreed closely with the following additional general question to which each subject responded independently: 'Would you say your overall personal orientation to nursing was more in the direction of helping patients recover, or toward counseling and giving emotional help to patients?' (Ward & Fetler, 1979, p. 384).

Permission to use and reproduce the Nursing Orientation Toward Care or Cure Scale was granted by Bonnie Bullough.

The second scale used to objectively collect data on

nursing role perspective was the Opinions About Nursing scale (see Appendix D, XX for a copy of the scale). This scale was used by Notter and Robey (1979) in the evaluation of the National League for Nursing's study on the open curriculum in nursing education. This scale was developed by Corwin in 1960 and modified by Bevis in 1970. Corwin called it the Nursing Role Conception Scale (Corwin, 1960; Ward & Fetler, 1979, p. 413). It "distinguishes relative valuation of three nursing role conceptions: professional, service, and bureaucratic" (Notter & Robey, 1979, p. 140).

> According to Corwin, nurses hold at least three role conceptions: professional, service, and bureaucratic. These conceptions are held simultaneously and in varying degrees. The first, the professional role conception, embodies loyalty to the profession, to standards of performance, and to formal knowledge. The service role conception reflects loyalty to the patient and to either humanitarian or religious principles or to both. The bureaucratic role conception calls for loyalty to the employing agency and to rules and regulations within the bureaucratic setting (Notter & Robey, 1979, p.141).

Corwin originally designed the scale "to measure the respondents' commitment to the hospital bureaucracy, the nursing profession, and the patient" (Ward & Fetler, 1979, p. 413). Notter and Robey used the Opinions About Nursing scale to determine if nursing role change (resocialization) had occurred through the open curriculum project.

> A concern often expressed by nursing educators regarding programs that promote career options through multiple exit/entry curriculums or advanced placement speaks to the problem of effecting nursing role

> change. This concern deals with the nature of socialization into nursing as an occupation and the process of resocialization from one role to another within the occupation. Some educators question whether previously licensed students, once indoctrinated in one role, can achieve reorientation to a different role, even if there is special curriculum planning for this objective (Notter & Robey, 1979, p. 255).

The Opinions About Nursing scale consists of three Likert-type scales, one for each nursing role conception: professional, service, and bureaucratic. Each statement about a hypothetical nursing situation asks for the respondent's normative response, a "should be" response (Notter & Robey, 1979, p. 142). The respondent is asked if she "strongly agrees," "agrees," is "undecided," "disagrees," or "strongly disagrees" with the statement (see Appendix D, XX for instructions to complete the scale). For purposes of this study, the instructions for completing the scale were modified (see Appendix D, XXI). The items for the three subscales are randomly placed throughout the Opinions About Nursing scale. For one item in each subscale the values for scoring are reversed (see Appendix D, XXII for instructions for scoring the scale). There are a total of 22 hypothetical nursing situations; eight pertain to professional role conception, eight to service role conception, and six to bureaucratic role conception.

Notter and Robey (1979) reported that Bevis' modification did not affect the validity or reliability of

Corwin's instrument (p. 142). Her modification improved the clarity of the instrument and brought terminology up to date (p. 142). Kramer in 1970 computed test-retest reliabilities after three and one half weeks on 52 senior BSN students. She found .89 on the bureaucratic subscale, .88 on the professional subscale, and .86 on the service subscale (Kinney, 1985).

The items "were constructed and selected on the basis of apparent relevance to the concepts represented - bureaucratic, professional, or service role" (Ward & Fetler, 1979, p. 413). Corwin reported that

> each item was pretested for internal consistency. Discriminatory power was measured for each item by computing critical ratios between upper and lower quartiles based on respondents' total scores for each scale. Only items reaching the 5 per cent level of significance were retained. Several items were omitted on the basis of criticisms of respondents, who were given opportunity to criticize items for ambiguity and relevance (Corwin, 1961b).

This test for internal consistency was performed on the responses of

> approximately 150 nurses, headnurses, student nurses, and licensed practical nurses from seven hospitals located in an upper Midwest metropolitan area. Two hospitals were large (more than 300 beds), three were medium sized (200 to 300 beds), and two were small (fewer than 200 beds); there was at least one church-affiliated and one nonchurch-affiliated hospital in each size classification. Respondents were not anonymous, although confidentiality was assured (Ward & Fetler, 1979, p. 414).

Two practicing nurses with a variety of experience in nursing analyzed the instrument, making critical comments and suggestions for revision (Corwin, 1960, p. 216).

"Kramer in 1966 utilized the 'known group' method to establish construct validity of the instrument..." (Minehan, 1977). The "known groups" were 20 nursing service administrators, 20 collegiate nursing school faculty, and 20 nurses with religious commitments. "Results showed significant differences ($p < .01$) in the predicted direction" (Kinney, 1985). As discussed in Chapter II, other investigators (Corwin, 1961a; Corwin, 1961b; Corwin & Taves, 1962; Davis, 1971; Notter & Robey, 1979; Blicharz, 1985) have found that Corwin's tool differentiated, in some aspects of nursing role conception, between nurses from different types of nursing education programs.

Minehan (1977) administered Corwin's Nursing Role Conception Scale to 42 RNs in one hospital. She reported that when she calculated intercorrelations on each subscale, there were no significant correlations on the bureaucratic subscale (15 possible), 9 significant correlations on the professional subscale (28 possible), and 8 significant correlations on the service subscale (28 possible). When she performed factor analysis on the respondents' answers, she found the tool contained four major factors. One was

clearly composed of professional subscale items and the other three with items from all three scales. When varimax rotation technique was utilized, it revealed that

> classification of items into distinct value-based role conceptions was not consistent with the responses of individuals to those items. In other words, while a particular cluster of items may have been measuring some common element, it was not..the cluster that had been designed to measure a particular role conception.

This raises "concern about the congruence of the theoretical framework with contemporary professional values. These results suggest that the beliefs upon which nurse role conceptions are based have shifted."

Minehan then asked five RNs to identify which role conception each item would belong to for a person who strongly agreed with the item and to which role conception it belonged to for a person who strongly disagreed with the item. She used Corwin's definitions for the role conceptions. "There was agreement by a minimum of 80 percent of the raters [four of the five] that 9 [or 41%] (of a possible 22) items measured similar role conceptions." This reflects "inadequacy of the conceptual framework, ambiguity or poor construction of items within the instrument, or both" (Minehan, 1977).

Kinney (1985) interpreted Minehan's (1977) findings as indicating that

> the way nursing roles have been previously conceptualized does not allow an acknowledgement of the multidimensionality. Perhaps while each role conception can be characterized as providing a specific frame of reference, the roles taken in combination generate a more complex explanation of role expectations experienced by nurses as they practice.

Corwin (1960, Appendix III) discusses what may be an answer to Minehan's (1977) criticism of the Nursing Role Conception Scale when he clarifies the use of the internal consistency test. One of the assumptions of the internal consistency test is that "'Statistically significant item differences between extreme segments of a total distribution assure a measure of a common variable.'" Corwin points out that

> In an empirical investigation of this assumption Sletto found that significant differences do not indicate that the measures pertain to a single variable, though higher Critical Ratios reduced the likelihood that similar variables are included in the total score. The scale may be intended as a summary of the relationship between several variables, such as 'rule-following,' 'punctuality,' etc. which provides an index of 'bureaucratic role conception.' A person may be rated high on one variable and low on another so that there is no necessary correlation between the variables in individual cases, though they enter into the total index relevant to the concept. It is obvious that knowledge of total scale scores does not provide inference about the scores on separate items, just as knowledge that a man is 'tall' does not indicate whether he has long legs or a long neck.

Corwin concludes that "it is measurement of a relationship between several not a common variable which is assumed" in the use of the internal consistency test.

Permission to use and reproduce the Opinions About

Nursing scale was granted by the National League for Nursing and Mary Bevis.

The open-ended questions used to elicit the perspective of the subject on the role of the nurse were: At this point in time how do you view the role of the nurse? What do you see as her unique role in the health care system? What do you feel is your role when you walk into a nursing situation (See Appendix D, XV)?

The structured questions, that were used in the telephone interview, were asked of the subjects in this study to obtain a retrospective perspective on their possible experience of resocialization, during the time of the study (see Appendix D, XVI). The following questions, preceded by the introductory statement, were asked of each subject during the telephone interview:

I'm interested in how your perspective on the role of the nurse has changed since the beginning of the term.

1. What did you see as the role of the nurse at the start?
2. What do you see as the role of the nurse now?
3. Can you see any definite evolution of your perspective on the role of the nurse over the time period during the fall term?

Both the open-ended questions and the structured interview questions were developed on the basis of

information gleaned from the review of literature concerned with the resocialization of RNs returning to school for their BSN.

Two additional questions were asked during the telephone interview to assess the effect on the subject of repeatedly answering the same questionnaires over the term:

1. Did responding to the questionnaires over the period of time of this study have any positive effect for you? If so, what?

2. Did responding to the questionnaires have any detrimental or negative effect? If so, what?

Procedure

To secure subjects for this study, the deans of nursing programs which admitted RNs to their BSN programs were contacted by phone during the summer of 1984. The purpose of the study was explained verbally and the formal proposal for the study was shared with them. In some instances, a personal interview was also arranged. Several deans declined to let the investigator approach their RN students to seek their participation in the study, but eight deans gave the investigator permission to do so.

The original plan was to select, for one group of study subjects, those RN students who were taking their first nursing course with a clinical component and, for another group as study subjects, those RN students who were taking general education or prerequisite courses. This latter group would serve as a control group. After talking with the deans of the nursing programs, it was found that not all of the institutions willing to participate had RN students who would be taking their first nursing course with a clinical component, but those who didn't, did have RN students who would be taking their first nursing course in the program. To make the sample size as large as possible for the group that would serve as the experimental group, it was decided to include in this group both RN students who were taking their first nursing course with a clinical component and RN students who were taking their first nursing course in the program.

The original plan was also to start data collection with a baseline of data before the subjects began classes in the fall term, but this proved to be impossible for two reasons. Getting materials to the potential subjects before the fall term began would have necessitated the deans of the programs providing the investigator with the names and addresses of the potential subjects, and since some deans felt strongly that this would violate the privacy of their

students, they declined to do so. Other deans, even though they had no objection to it, could not provide the investigator with names and addresses of potential subjects because they would not know who would be taking which courses until after the students had registered for classes. These situations prevented the potential subjects from being invited to participate in the study until after classes started in the fall term.

During the first week of classes in the fall term of 1984, all of the potential subjects either received by mail or in class were provided by their instructor with the "Letter to RN Students," or were invited personally by the investigator to participate in the study at the end of their first class of the fall term. The informed consent procedures were detailed earlier in Chapter III. Each potential subject received along with the "Letter to RN Students" the "Agreement to Participate" form and a "Demographic Data" form. If they decided to participate in the study, they were asked to return the "Agreement to Participate" and the "Demographic Data" form in the stamped, self-addressed envelope provided. Table 27 shows the number of potential subjects from each institution who were provided with these preliminary materials and the number and percentage of those who became actual subjects in the study. The return rate varied from 100% to 13.3% with the

overall return rate being 36.9%. This table also shows the number and percentage of subjects from each institution who completed the entire study. This completion rate varied from 100% to 33.3% with the overall rate being 67%.

Table 27

Number and Percentage of Potential, Actual, and Complete Subjects by Institution and Overall

Institution	Potential Subjects	Actual Subjects	Complete Subjects
#1	10	9 (90%)	7 (77.8%)
#2	24	10 (41.7%)	6 (60%)
#3	30	4 (13.3%)	3 (75%)
#4	0	0	0
#5	14	8 (57.1%)	6 (75%)
#6	9	5 (55.6%)	4 (80%)
#7	29	9 (31%)	7 (77.8%)
#8	3	0	0
#9	112	39 (34.8%)	27 (69.2%)
#10	31	12 (38.7%)	4 (33.3%)
#11	0	0	0
#12	1	1 (100%)	1 (100%)
Overall	263	97 (36.9%)	65 (67%)

After the subject returned the preliminary materials, she was sent the first questionnaire along with an introductory letter which requested that she return the questionnaire within the next three days in the stamped, self-addressed envelope provided. The previously described five scales (STAI Form X-1, Hostility Inventory, Short Multiscore Depression Inventory, Nursing Inventory Toward Care or Cure, and Opinions About Nursing) and the two

open-ended questions were combined to appear as one questionnaire (see Appendix E for the first questionnaire). The same questionnaire was sent to the subjects three more times during the term (1/3 of the way through the term, 2/3 of the way through the term, and during the last week of the term). The time interval between questionnaires varied from three and one-half weeks to five weeks, depending on the academic calendar of the subject. The contents of the questionnaire were the same each time, but the order of the contents was different each time. Table 28 gives the order of the contents for each of the four combined questionnaires. See Appendix E for the first combined questionnaire. Each of the four combined questionnaires was accompanied by a different introductory letter. See Appendix F, I, II, III, and IV for the content of these introductory letters. If the questionnaire was not returned in five days, the subject was sent a reminder letter. Only for the fourth questionnaire were the subjects sent a second reminder letter. See Appendix G, I, II, III, and IV for the content of these reminder letters.

After the fourth questionnaire was returned, the subject was contacted for the telephone interview. After all the interviews were done with these subjects who had returned the fourth questionnaire, the remainder of the subjects, who had completed previous questionnaires but not

the fourth one, were contacted for the telephone interview. A total of 96 telephone interviews was completed. The investigator conducted all of the telephone interviews. These telephone interviews varied in length from 6 to 48 minutes with an average time of 15 minutes . The last telephone interview was held on January 27, 1985. Data collection began on August 27, 1984.

Table 28

Order of Contents for Each of the Four Combined Questionnaires

Questionnaire Contents	1st 1st week of term	2nd 1/3 through term	3rd 2/3 through term	4th last week of term
Open-ended Questions	1	6	4	1
Short Multiscore Depression Inventory	2	3	2	5
Hostility Inventory	3	4	3	6
STAI Form X-1	4	5	1	4
Nursing Inventory Toward Care or Cure	5	1	5	3
Opinion About Nursing	6	2	6	2

Study Design

The research design used for this study was a quasi-experimental, discrete, time series design. The dependent variables were all measured at four functionally equidistant points in time. All measurements were done after the treatment was introduced. A control group was also measured on the dependent variables at the same four points in time. All subjects in both the control and experimental group were measured on all the dependent variables at each time point. Both the control and experimental subjects were self-selected (Campbell & Stanley, 1963, pp. 39-43; Cook & Campbell, 1979, pp. 207-235, 262-283; Kerlinger, 1973, pp. 343-345; Metzger & Schultz, 1982).

In this study the RN students taking non-nursing courses served as the control group. The control group subjects were from two different nursing programs. The RN students taking nursing courses served as the experimental group. The experimental group subjects were from seven different nursing programs.

The independent variables were the taking of nursing courses and the points in time. The independent variable of

taking a nursing course was one of three types of nursing courses: the first nursing course in the program with a clinical component for the RN student; the first theoretical nursing course in the program for the RN student, or the first nursing course in the program for the RN student, which included both a theoretical and clinical component. The independent variable of the point in time consisted of four such discrete points, functionally equidistant apart: the first week of class during the term, one-third of the way through the term, two-thirds of the way through the term, and during the last week of the term.

The dependent variables in this study were seven scales, two open ended questions, and a structured telephone interview. The seven scales used as dependent variables were the State Anxiety Inventory, Hostility Inventory, Multiscore Depression Inventory, Nursing Orientation Toward Care or Cure, and Opinions About Nursing (Professional, Bureaucratic, and Service Scales). The two open-ended questions used as dependent variables related to role strain and nursing role perspective (see Appendix D, XV). The structured telephone interview used as a dependent variable also related to role strain and nursing role perspective (see Appendix D, XVI). Both control and experimental subjects were measured on the same dependent variables simultaneously at the same four functionally equidistant

time points, except for the structured telephone interview, which was conducted after the fourth time point. All measurements of the dependent variables were done on each subject after the introduction of the independent variable of taking a nursing course.

No other variables were controlled but several attribute variables were accounted-for or measured: which institution the subject was attending, which type of RN/BSN program the subject was in, what time of day the subject was taking classes, which type of nursing class the experimental subject was taking, motivator for returning to school for the BSN, nursing position before and after starting back to school, amount of support and encouragement in returning to school from family, friends, and work peers, work and student status (full or part time), type and number of concurrent life roles, marital status, number of children and their ages, degree of life style change since going back to school, type of basic nursing program and year graduated, age, number of years worked in nursing, and number of CEUs earned in the last year.

Statistical Procedures

The predominant statistical analysis applied to the data of this study was multivariate analysis of variance. This analysis was used for the doubly multivariate repeated measures design of this study. There were 65 subjects who completed all four sets of questionnaires. There were 28 response variables (measures of the dependent variables) recorded for each subject. Each of seven scales were administered on four occasions to the subjects. Time was a within-subjects factor. Group was a between-subjects factor: RN students taking non-nursing courses and RN students taking nursing courses. The group between-subjects factor was increased to three levels when the RN students taking nursing courses were divided into those taking theoretical courses and those taking courses with a clinical component. The group between-subjects factor was further increased to four levels when the RN students taking nursing courses were classified as to the number of nursing courses in the program the subject was taking: first, second or third, or fourth.

The software program MANOVA from SPSS Inc. (Statistical Package for the Social Sciences, 1983) was utilized for the statistical analysis. The main effects of group and time were determined as well as the interaction

effect of group by time. The main effect of group was also determined for each of the four time points separately. The main effect of time was also determined for each group separately. The three dependent variables measuring role strain were analyzed simultaneously and the four dependent variables measuring nursing role conception were analyzed simultaneously (SPSS Inc., 1983, pp. 532-535). Each dependent variable was also analyzed separately for its contribution to the multivariate effect if the F ratio for MANOVA was significant (Goodwin, 1984).

To determine trends over the four time points for each of the dependent variables for each group, orthogonal polynomials were fit to each dependent variable (SPSS Inc., 1983, pp. 527-529).

The influence of accounted-for or demographic variables was determined by either entering them into the doubly multivariate repeated measures design as factors or as constant covariates, depending on their level of measurement (SPSS Inc., 1983, pp. 527-529).

The multivariate analysis of variance was used instead of separate analysis of variance for each dependent variable because it keeps "the alpha level at a known and constant rate for the entire set of univariate tests subsumed under it. It provides an overall protection for alpha by

accurately estimating the probability of a Type 1 error across the package of dependent variables considered simultaneously" (Goodwin, 1984). It also "considers the correlations between the variables" (Bray & Maxwell, 1985, p. 9).

Assumptions

The underlying assumptions of this study were the following:

1. One term is enough time for role strain to develop and manifest itself in these subjects.
2. One term is enough time for nursing role conception to change in these subjects.
3. The variables measured by the scales are a valid indication of role strain and nursing role perspective.
4. The subjects will openly and honestly respond to the data gathering techniques used in the study.
5. The subjects in this study are representative of RN students.

6. Confounding variables that could influence the dependent variables will be randomly distributed between the control and experimental group.

Limitations of the Study

A number of situations decreased the internal validity of the study. Since no measurements were taken on the dependent variables before the introduction of the treatment effect, it is difficult to identify the presence of reactive measurement effects and maturation (Campbell & Stanley, 1963, p. 41; Kerlinger, 1973, p. 343). It was impossible to control historical effects in the lives of the subjects which might influence the dependent variables (Campbell & Stanley, 1963, p. 42; Kerlinger, 1973, p. 344). The subjects were self-selected and it was not possible to randomly assign them to groups. Only four time points were observed for the dependent variable. This small number of time points decreases internal validity. The researcher did all of the telephone interviews and was aware at the time of the interview if the subject was an RN who had taken non-nursing or nursing courses. This possible source of subjectivity in data collection weakens internal validity (Campbell & Stanley, 1963, p. 41).

External validity was threatened in that the measurements made were not typical of those usually taken on RN students and this could result in a unique reaction of these subjects with these measurement methods (Campbell & Stanley, 1963, P. 41).

Strengths of the Study

A number of situations increased the internal validity of the study. Although no measurements were taken on the dependent variables before the introduction of the treatment effect for the subjects who served as the experimental group, a control group of RN students taking non-nursing courses was utilized. These subjects were measured on the same dependent variables at the same time points simultaneously with the experimental subjects. The use of this control group tends to decrease the effect of history in the experimental group and increase the internal validity of the study (Cook & Campbell, 1979, pp. 211, 215, 218; Kerlinger, 1973, pp. 344). The same subject, in both the control and experimental group, was measured at all four time points. This increases internal validity by decreasing random error. The use of multiple measures for the constructs of interest, role strain and nursing role perspective, strengthened the internal validity of the study

(Cook & Campbell, 1979, p. 214).

The fact that the subjects were from eight different institutions and that both RN/ BSN programs for RNs only and basic generic BSN programs that admit RN students were represented, increases the external validity of the study (Campbell & Stanley, 1963, p. 41).

Summary

Nineteen questions were formulated to be answered by this study. The following terms were defined: RN student, BSN program, non-nursing course, nursing course, role strain, nursing role perspective, and term (academic).

The subjects in this study were 97 RN students enrolled in eight different BSN programs in the greater Chicago area. One group of 47 RN students were taking non-nursing courses and another group of 50 RN students were taking nursing courses. All of the subjects were female except for two males in the nursing course group.

The subjects in both groups were similar on the demographic variables except that a typical RN student taking non-nursing courses was enrolled in a basic generic BSN program which admitted RN students, a Diploma graduate,

and not a parent; whereas, a typical RN student taking nursing courses was enrolled in a BSN program for RNs only, an ADN graduate, and a parent.

The subjects voluntarily consented to participate in the study after receiving a verbal and/or written explanation of the study. They were assured of anonymity and confidentiality, and that their consent to participate would not be made known to anyone in their academic institution.

Three methods were used to collect data for this study in addition to the Demographic Data questionnaire: objective scales, open-ended questions, and a telephone interview. The objective scales of the State Form of the State-Trait Anxiety Inventory, the Hostility Inventory, and the Short Multiscore Depression Inventory were used to gather information on the presence of role strain. The objective scales of the Nursing Orientation Toward Care or Cure and Opinions About Nursing were used to gather information on the presence of resocialization in the subjects. The same scales and the open-ended questions were administered to the subjects at each of four points in time during one academic term: during the first week of the term, one-third of the way through the term, two-thirds of the way through the term, and during the last week of the term. The telephone

interview was conducted after the return of the fourth set of scales and open-ended questions. Complete data were gathered on 65 subjects: 34 RN students taking non-nursing courses and 31 RN students taking nursing courses.

The research design of the study was a quasi-experimental, discrete time series design. The subjects taking non-nursing courses served as the control group and those taking nursing courses as the experimental group. The independent variables were the taking of a nursing course and the four points in time. The dependent variables were the objective scales, the two open-ended questions, and the telephone interview. No other variables were controlled but the demographic variables were accounted-for.

The major statistical analysis applied to the data of this study was the multivariate repeated measures analysis of variance. Time was a within-subjects factor and group was a between-subjects factor. To determine trends over the four time points for each of the dependent variables for each group, orthogonal polynomials were fit to each dependent variable.

Two of the major assumptions of this study were that one academic term was enough time for role strain and professional resocialization to develop and be manifested

and that the variables measured by the scales were a valid indication of role strain and nursing role perspective. The major limitations to internal validity were the lack of measurement of the subjects on the dependent variables before the the beginning of the academic term and a small number of time points at which the subjects were measured. The use of a control group did serve to increase internal validity as well as the use of multiple measures for the constructs of interest, role strain and nursing role perspective. External validity was increased by the variety of academic institutions and BSN programs the subjects were enrolled in.

CHAPTER IV

RESULTS

The results of this study will be presented using the specific research questions outlined in Chapter III as the organizing framework.

Role Strain Variables

1. Do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses? Role strain was assumed to be evidenced by the scores on three scales (STAI Form X-1, Hostility Inventory, and Short Multiscore Depression Inventory) that measured emotional states that are activated during role strain. These measures of role strain were taken at four points in time during the academic term. All RN students taking nursing courses were considered as one group and all RN students taking non-nursing courses were considered as one group. The three scales measuring role strain were analyzed simultaneously by the doubly multivariate repeated measures analysis of variance procedure.

Figures 1, 2, and 3 plot the means, across the four points in time, of the indicators of role strain for the two groups of RN students. The means and standard deviations for each of these scales, over the four points in time, for the two groups can be found in Appendix H, I. The RN students taking nursing courses consistently had higher mean scores on the STAI Form X-1 than the RN students taking non-nursing courses. The RN students taking nursing courses had higher mean scores on the Hostility Inventory at time points one and two than the RN students taking non-nursing courses but lower mean scores at time points three and four. The RN students taking nursing courses consistently had lower mean scores on the Short Multiscore Depression Inventory than the RN students taking non-nursing courses.

When the mean scores across time, of the two groups, on the role strain variables were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 29). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. These two test statistics were chosen because "when differences among groups are spread along several dimensions, the ordering of the test criteria in terms of

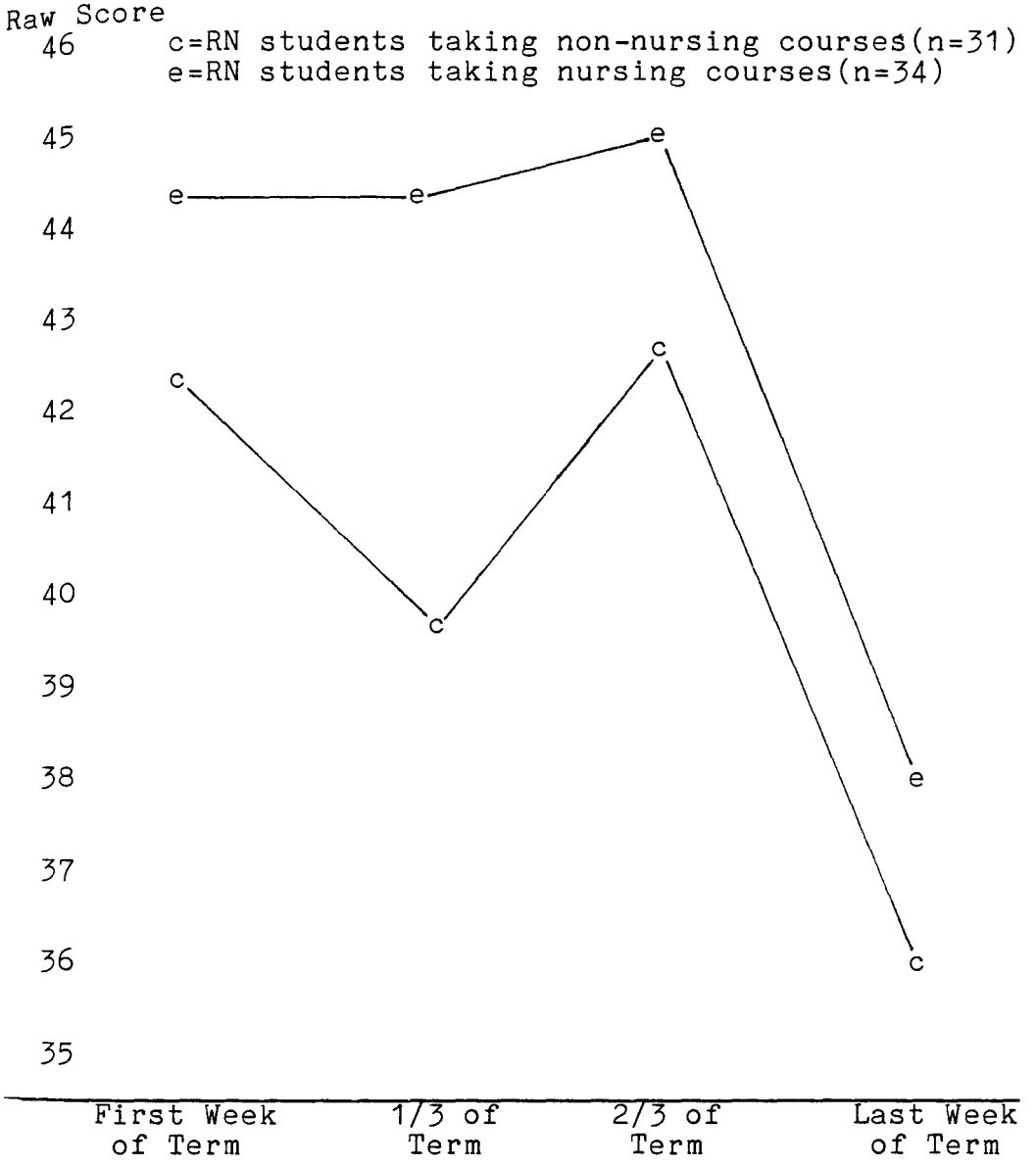

Figure 1. Mean score on STAI Form X-1 at each of four points in time during the academic term for the two groups of RN students

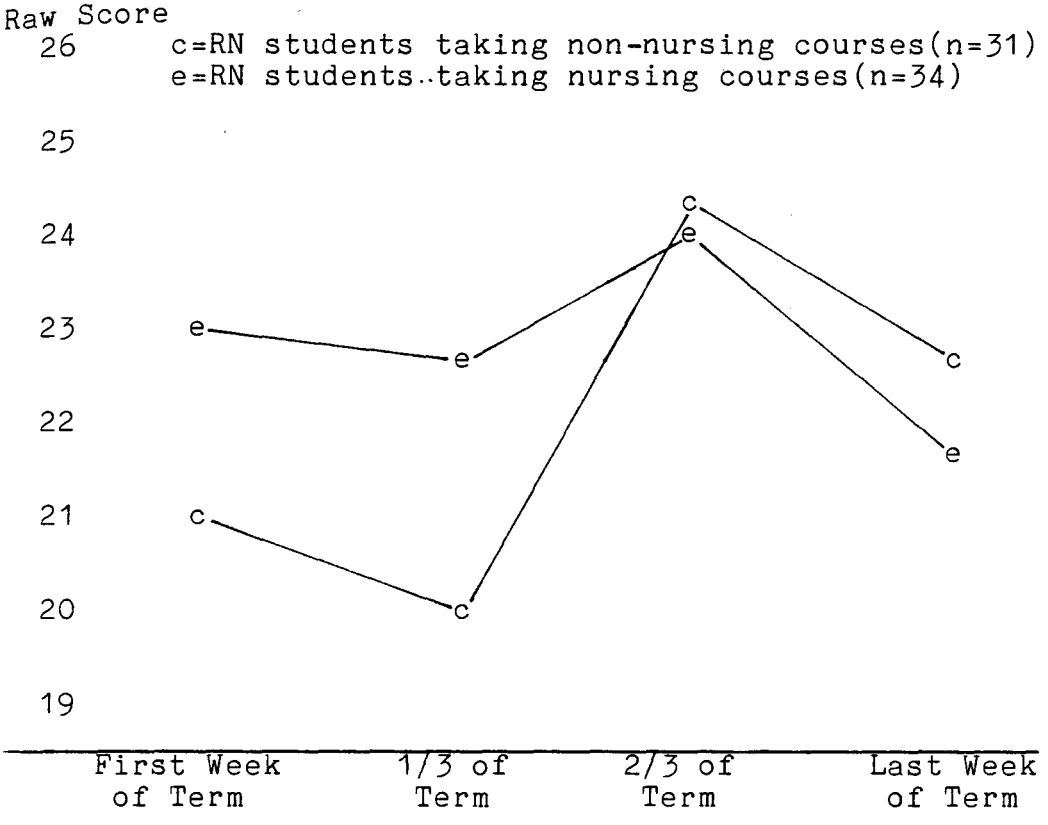

Figure 2. Mean score on Hostility Inventory at each of four points in time during the academic term for the two groups of RN students

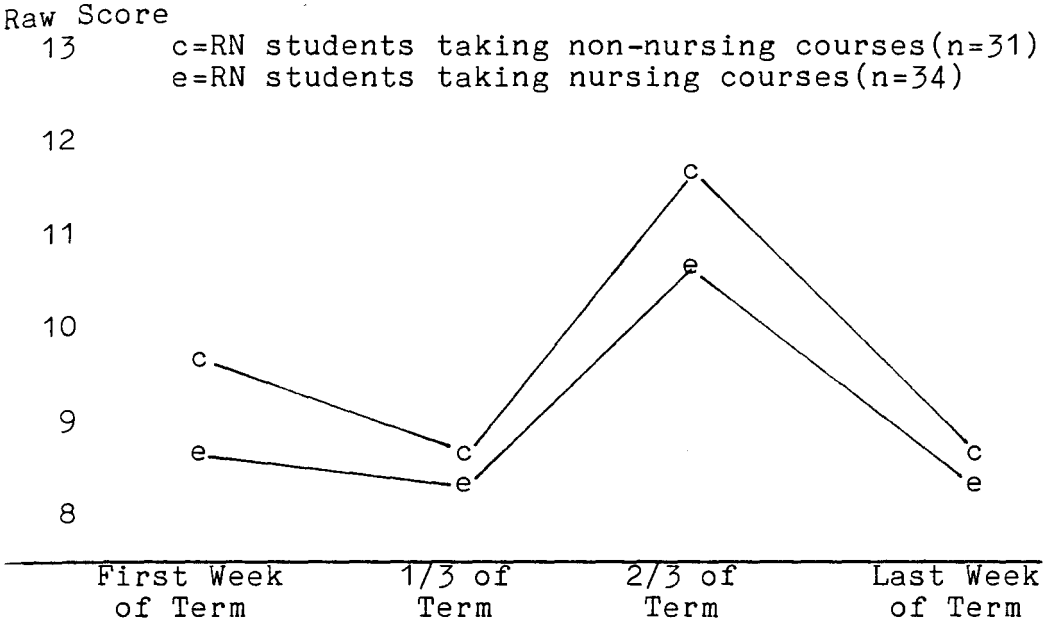

Figure 3. Mean score on Short Multiscore Depression Inventory at each of four points in time during the academic term for the two groups of RN students

decreasing power is Pillai's, Wilks', Hotelling's, and Roy's. Pillai's trace is also the most robust criterion" (Norusis, 1985, p. 221). Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated (Norusis, 1985, p. 211). Only 7.4% of the variance in the three scales could be attributed to group membership (Pillai-Bartlett trace divided by the number of variates or the cannonical correlation squared) (Bray & Maxwell, 1985, pp. 35-37). Or, looking at the analysis from a different perspective, 92.6% of the total variability was not explained by group differences (value of Wilks' lambda)

(Norusis, 1985, p. 213). Also, the eigenvalue (the ratio of SS-between to SS-within for a particular discriminant function variate) was very small, indicating very small group differences on the one variate (Bray & Maxwell, 1985, p. 26). As expected, the dimension reduction analysis revealed that the eigenvalue was not significantly different, at the .05 level, from 0 (Norusis, 1985, p. 224).

Even though the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made and that the three scales are correlated (Bartlett's test confirmed that the correlation matrix of the role strain variables was significantly different, at the .05 level, from an identity matrix, which indicates independent variables), they also revealed that there was no significant difference, at the .05 level, between the two groups of RN students on any of the three scales when the three scales were analyzed individually (Norusis, 1985, p. 203, 207). This was to be expected since the multivariate statistics were not significant.

Since the original plan had been to use, as experimental subjects, only RN students taking their first nursing course with a clinical component, it was decided to divide the RN students taking nursing courses into two

Table 29

Values for Group Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.074(1)	.111	.147
Approx F	1.618	1.191	1.050
Sig of F	.194	.316	.402
Wilks			
Value	.926	.890	.857
Approx F	1.618	1.205	1.046
Sig of F	.194	.308	.406
Eigenvalue			
Root No. 1	.080	.122	.123
Root No. 2		.000	.039
Root No. 3			.000
Cannonical Corr			
Root No. 1	.272	.330	.331
Root No. 2		.041	.194
Root No. 3			.017
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.926	.890	.857
F Value	1.618	1.205	1.046
Sig of F	.194	.308	.406
Roots		2 to 2	2 to 3
Value		.998	.962
F value		.051	.585
Sig of F		.950	.674
Roots			3 to 3
Value			1.000
F value			.017
Sig of F			.896

(1) All values are rounded to three decimal places

Table 29 (continued)

Values for Group Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(1,63)	(2,62)	(3,61)
Anxiety			
Hypothesis SS	531.531	1040.859	620.336
Error SS	25730.215	25220.887	25641.410
F value	1.301	1.279	.492
Sig of F	.258	.285	.689
Hostility			
Hypothesis SS	48.482	113.542	940.377
Error SS	24292.364	24227.304	23400.470
F value	.126	.145	.817
Sig of F	.724	.865	.489
Depression			
Hypothesis SS	35.750	38.821	536.945
Error SS	14302.635	14299.563	13801.440
F value	.157	.084	.791
Sig of F	.693	.919	.504
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.034	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	1.799	1.764	1.858
With D. F.	(3,63)	(3,62)	(3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

groups. Those RN students taking their first theoretical nursing course in the program were considered as one group and those RN students taking their first nursing course with a clinical component were considered as one group. Those RN students whose first nursing course in the program consisted of both a clinical and a theoretical component were placed in this latter group. Those RN students taking non-nursing courses continued to be considered as one group and made up a third group. The same analyses done on the previous two groups were done on these three groups.

Figures 4, 5, and 6 plot the means, across the four points in time, of the indicators of role strain for the three groups of RN students. The means and standard deviations for each of these scales over the four points in time for the three groups can be found in Appendix H, II. With the RN students taking nursing courses separated into these two groups, one noted that only on the Hostility Inventory did their patterns of scores across time appear similar. The predominant pattern of the mean scores across time on the three variables for the three groups was a decrease on the second point in time relative to the first, with a peak at time point three, and a decided fall at time point four. None of the three groups had a similar pattern across time on the STAI Form X-1. All three groups roughly

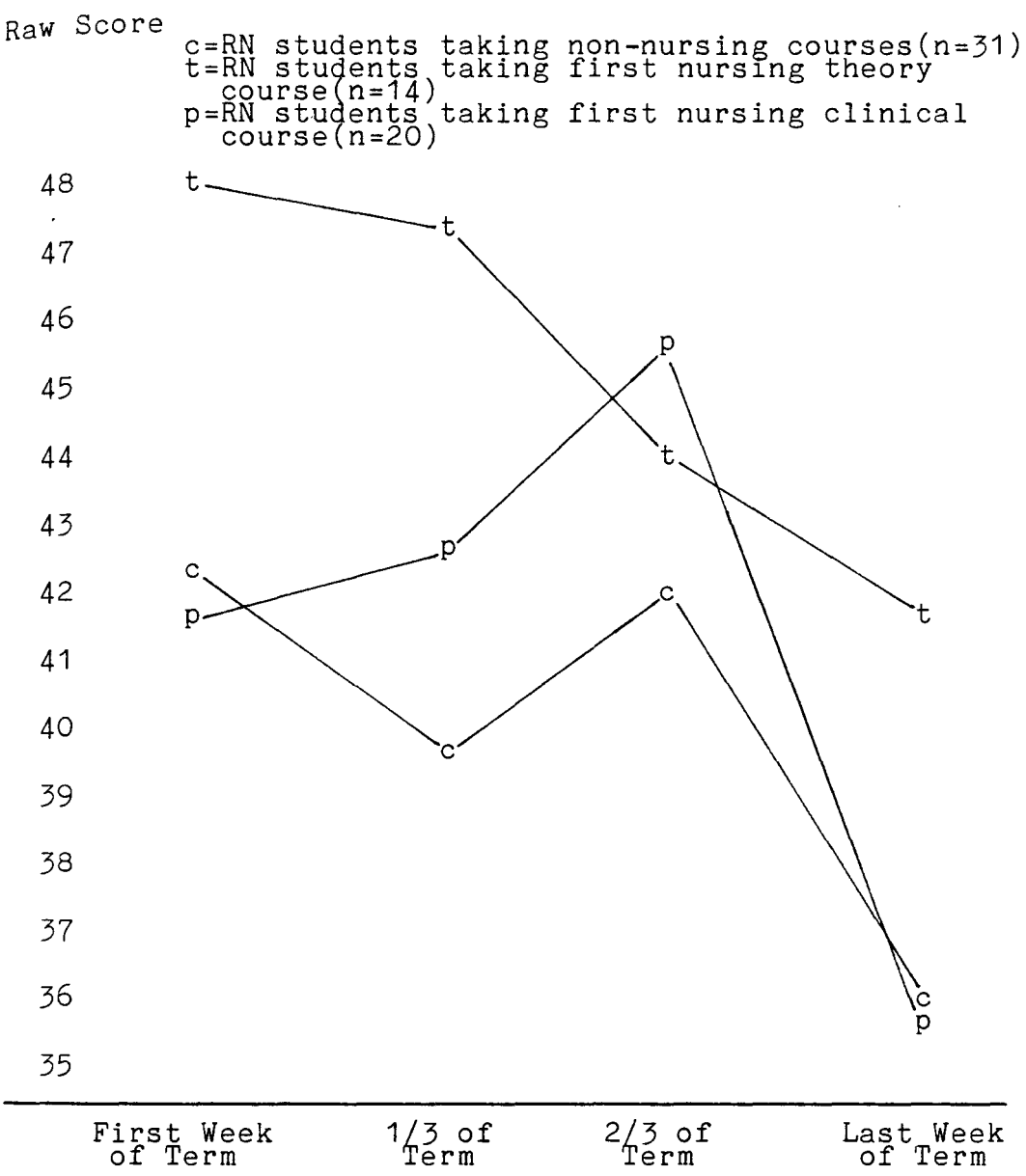

Figure 4. Mean score on STAI Form X-1 at each of four points in time during the academic term for the three groups of RN students

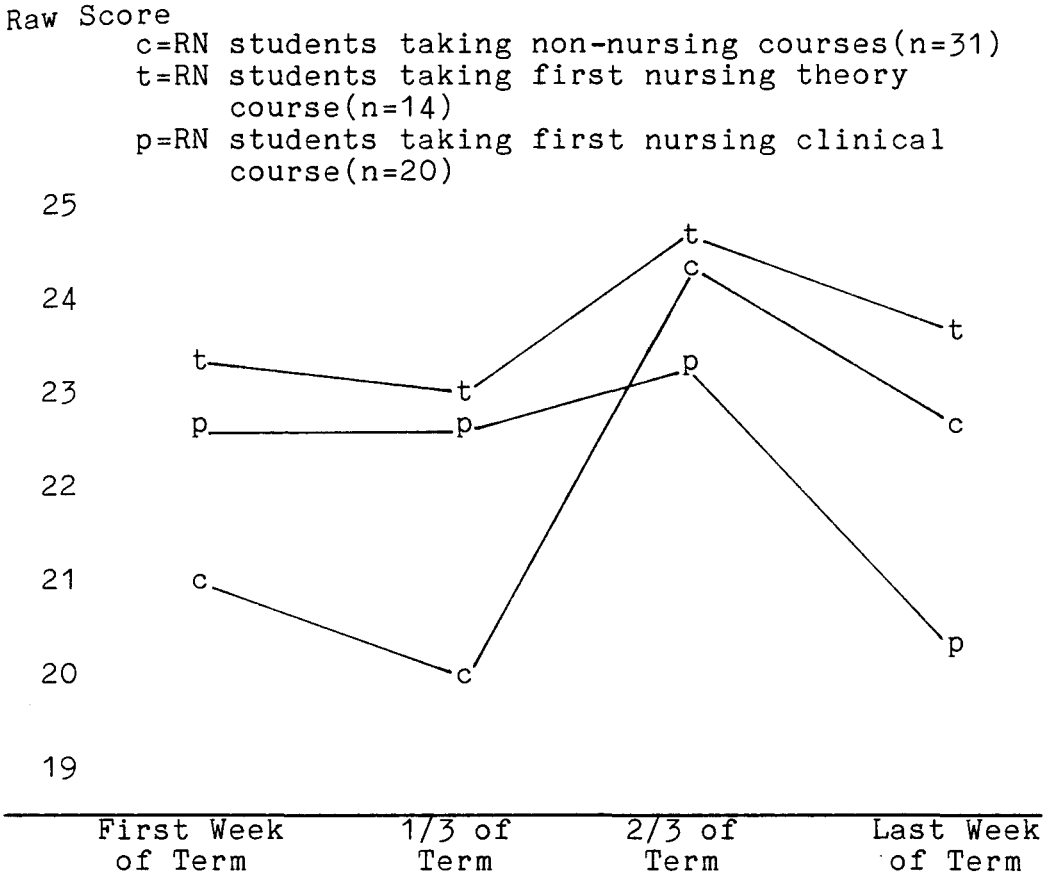

Figure 5. Mean score on Hostility Inventory at each of four points in time during the academic term for the three groups of RN students

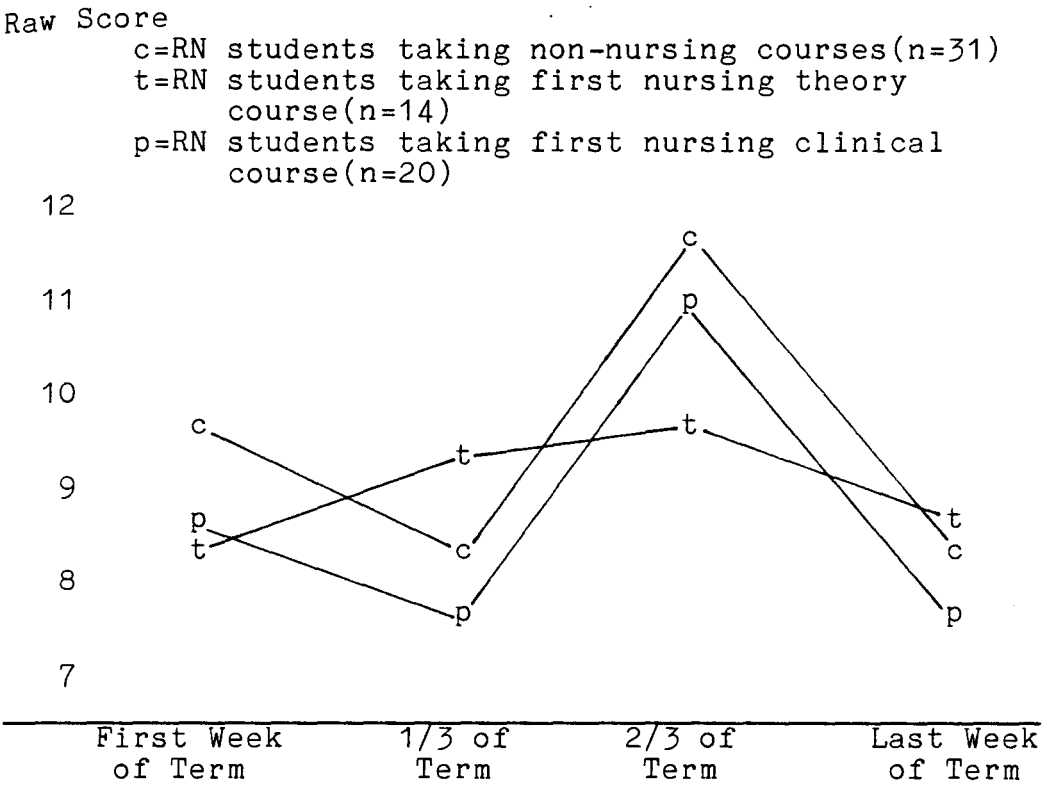

Figure 6. Mean score on Short Multiscore Depression Inventory at each of four points in time during the academic term for the three groups of RN students

had the same pattern across time on the Hostility Inventory. Those RN students taking their first nursing course with a clinical component and those taking non-nursing courses had a similar pattern across time on the Short Multiscore Depression Inventory.

When the mean scores, of the three groups, on the role strain variables were analyzed simultaneously by repeated

measures multivariate analysis of variance, there was no significant difference between the three groups on any of the variables (see Table 29). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated (Norusis, 1985, p. 211). Only 5.6% of the variance in the three scales could be attributed to group membership (Pillai-Bartlett trace divided by the number of variates or the average of the squared cannonical correlations) (Bray & Maxwell, 1985, pp. 35-37). Also, all the eigenvalues were very small, indicating very small group differences on both of the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different, at the .05 level, from 0. Root 1 to 2 is a test of the hypothesis that all eigenvalues are equal to 0. Successive groupings of roots in the dimension reduction analysis "correspond to tests of the hypothesis that all remaining functions are equal in the groups." These tests allow the assessment of the "number of dimensions on which the groups differ" (Norusis, 1985, p. 224). There were no constructs or dimensions underlying the data since there were no group differences on the role strain variables (Bray & Maxwell, 1985, p. 43).

Even though the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made and that the three scales are correlated (Bartlett's test confirmed that the correlation matrix of the role strain variables was significantly different from an identity matrix, which indicates independent variables), they also revealed that there was no significant difference, at the .05 level, between the three groups of RN students, on any of the three scales, when the three scales were analyzed individually (Norusis, 1985, p. 207). This was to be expected since the multivariate statistics were not significant.

Because the RN students taking nursing courses were at different points in their programs, it was decided to divide the RN students taking nursing courses into three groups based on the previous number of nursing courses they had completed. Those RN students taking their very first nursing course in their program, regardless of whether it contained a theoretical or clinical component, were considered as one group. Those RN students taking their second or third nursing course were considered as one group. The small numbers of the RN students taking either their second or third nursing course necessitated the combining of these two categories. And those RN students taking their fourth nursing course were considered as one

group. Those RN students taking non-nursing courses continued to be considered as one group and made up a fourth group. The same analyses done on the previous two and three groupings of RN students were done on these four groups.

Figures 7, 8, and 9 plot the means, across the four points in time, of the indicators of role strain for the four groups of RN students. The means and standard deviations for each of these scales over the four points in time for the four groups can be found in Appendix H, III. The predominant pattern of the mean scores across time on the three variables for the four groups was that those RN students taking their fourth nursing course had a different pattern from the other three groups of RN students. Only on the anxiety scale was the pattern across time not similar for these three groups. On the anxiety scale, those RN students taking their second or third nursing course tended to have a pattern similar to those taking their fourth nursing course but with a peak at time point three instead of two, as the RN students taking their fourth nursing course exhibited. All four groups on all three scales showed a decrease at time point four in relation to time point three, except for those RN students taking their fourth nursing course, who showed an increase at time point four on the Short Multiscore Depression Inventory. Another common finding was less evidence of the particular emotional

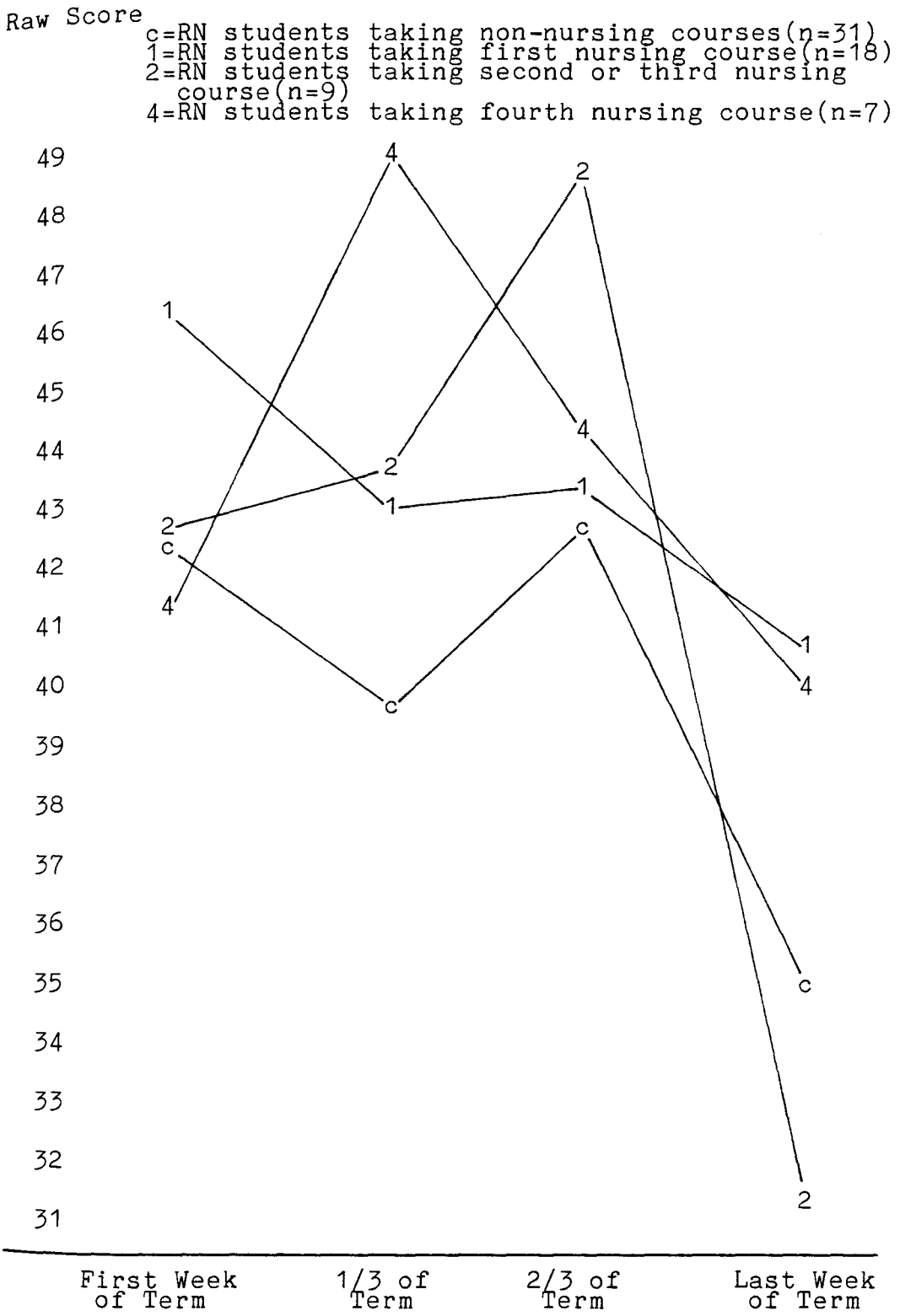

Figure 7. Mean score on STAI Form X-1 at each of four points in time during the academic term for the four groups of RN students

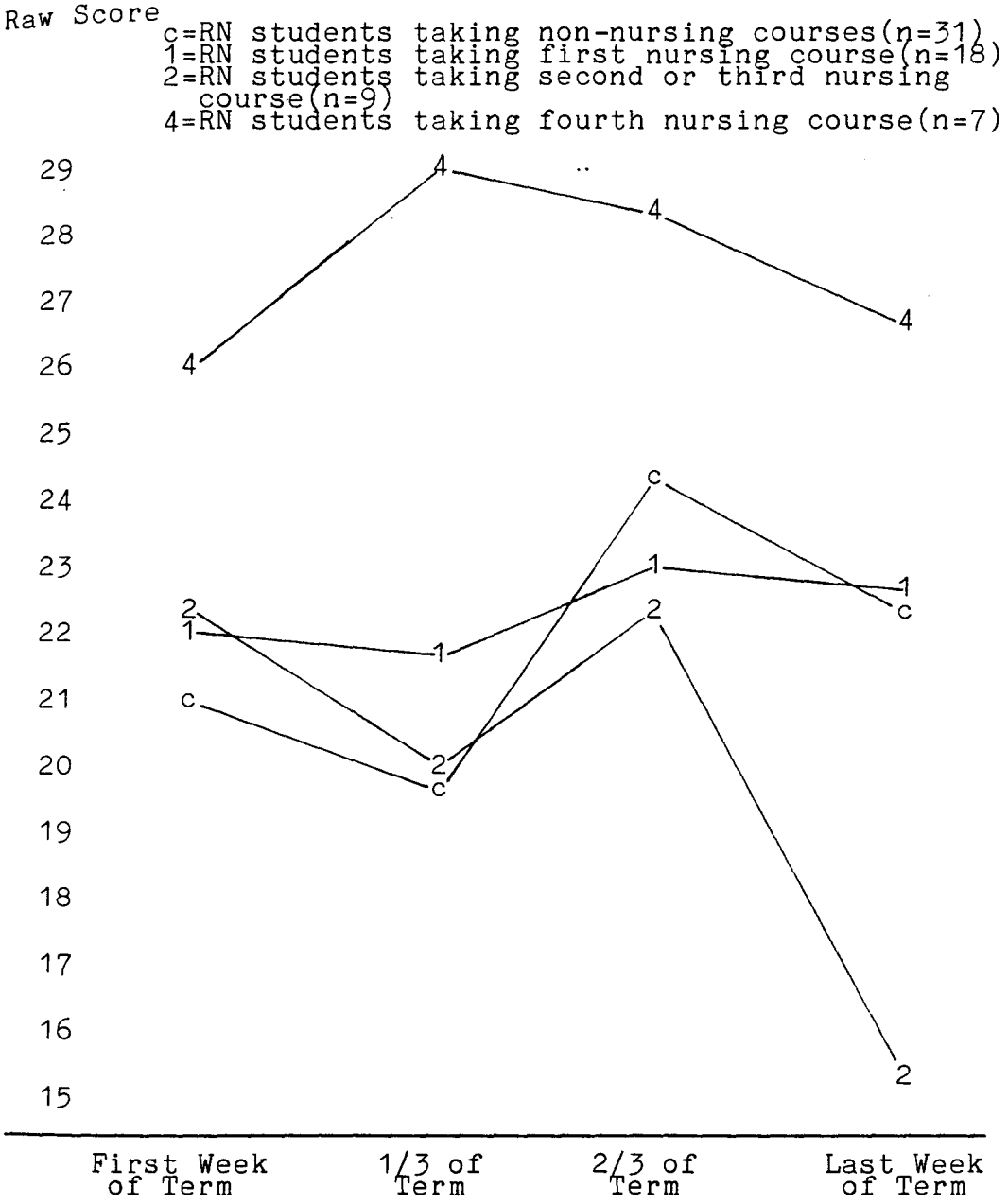

Figure 8. Mean score on Hostility Inventory at each of four points in time during the academic term for the four groups of RN students

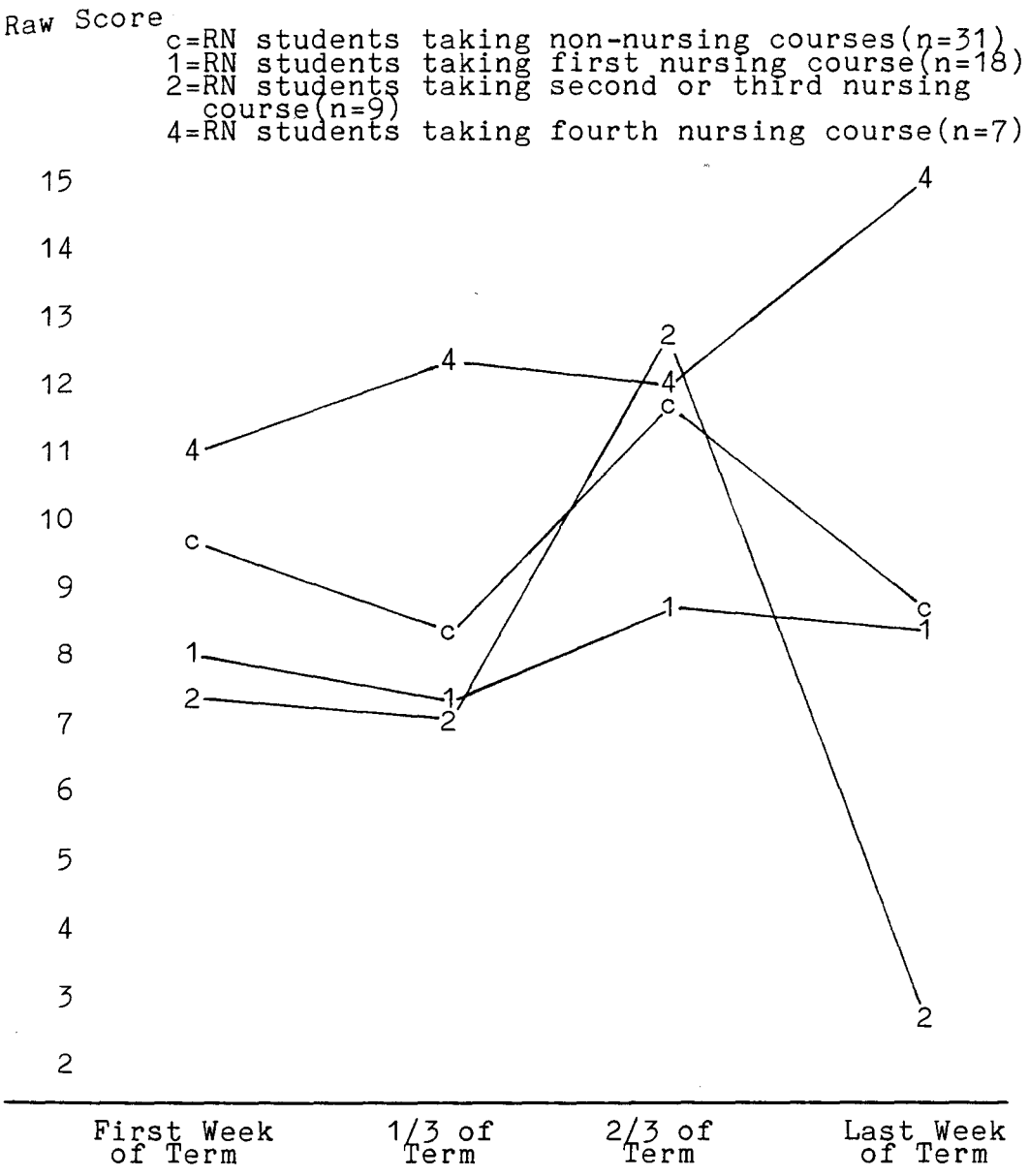

Figure 9. Mean score on Short Multiscore Depression Inventory at each of four points in time during the academic term for the four groups of RN students

state at the end of the term than during the first week of the term. This was true for all four groups on the state anxiety scale. But on the Hostility Inventory scale it was only true for those RN students taking their second or third nursing course. And on the depression scale one noted a marked increase at the end of the term for those RN students taking their fourth nursing course.

When the mean scores across time, of the four groups, on the role strain variables were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four groups on any of the variables (see Table 29). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated (Norusis, 1985, p. 211). Only 4.9% of the variance in the three scales could be attributed to group membership (Pillai-Bartlett trace divided by the number of variates or the average of the squared cannonical correlations) (Bray & Maxwell, 1985, pp. 35-37). Also, all the eigenvalues were very small, indicating very small group differences on the three variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different, at the .05 level, from 0.

Even though the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made and that the three scales are correlated (Bartlett's test confirmed that the correlation matrix of the role strain variables was significantly different, at the .05 level, from an identity matrix which indicates independent variables), they also revealed that there was no significant difference between the four groups of RN students on any of the three scales when the three scales were analyzed individually (Norusis, 1985, p. 207). This was to be expected since the multivariate statistics were not significant.

No significant differences were found between the groups, with any of the three groupings of RN students, on the mean scores, across time, of the role strain variables.

2. Do RN students in a BSN program taking nursing courses evidence more role strain at each of four time points during a term than those taking non-nursing courses? When the mean scores at time point one, the first week of the term, of the two groups on the role strain variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 30). The values and the approximate Fs of the test statistics

Table 30

Values for Group Effect for Role Strain Variables at Time Point One

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.054	.126	.142
Approx F	1.156	1.371	1.013
Sig of F	.334	.232	.432
Wilks			
Value	.946	.875	.861
Approx F	1.156	1.380	1.013
Sig of F	.334	.228	.432
Eigenvalue			
Root No. 1	.057	.128	.129
Root No. 2		.013	.025
Root No. 3			.004
Cannonical Corr			
Root No. 1	.232	.337	.338
Root No. 2		.113	.155
Root No. 3			.061
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.946	.875	.861
F Value	1.156	1.380	1.013
Sig of F	.334	.228	.432
Roots		2 to 2	2 to 3
Value		.987	.972
F Value		.391	.426
Sig of F		.678	.790
Roots			3 to 3
Value			.996
F Value			.228
Sig of F			.635

(1) All values are rounded to three decimal places

Table 30 (continued)

Values for Group Effect for Role Strain Variables at Time Point One

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(1,63)	(2,62)	(3,61)
Anxiety			
Hypothesis SS	65.108	417.652	206.397
Error SS	9889.446	9536.901	9748.157
F value	.415	1.358	.431
Sig of F	.522	.265	.732
Hostility			
Hypothesis SS	56.935	59.299	137.850
Error SS	6163.680	6161.317	6082.765
F value	.582	.298	.461
Sig of F	.448	.743	.711
Depression			
Hypothesis SS	18.837	19.650	83.283
Error SS	3616.148	3615.335	3551.701
F value	.328	.168	.477
Sig of F	.569	.845	.700
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.034	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	2.735	2.638	2.745
With D. F.	(3,63)	(3,62)	(3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. Only 5.4% of the variance in the three scales at time point one could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point one on any of the three scales when the three scales were analyzed individually (see Table 30). Bartlett's test confirmed that the role strain variables were dependent (correlated) variables.

When the RN students were divided into the three and four groups, as previoulsly described, and the preceeding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the role strain variables at time point one, when the role strain variables were analyzed simultaneously (see Table 30). The values and the approximate Fs of the test statistics

pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated for both the three groups and four groups of RN students. Only 6.3% of the variance in the three scales at time point one could be attributed to group membership with the RN students divided into three groups and only 4.7% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point one on any of the three scales when the three scales were analyzed individually (see Table 30). Bartlett's test confirmed that the role strain variables were dependent in both the three and four groupings of RN students.

The mean scores at time point two, one-third of the way through the term, of the two groups of RN students on

the role strain variables were then analyzed simultaneously by multivariate analysis of variance. No significant difference between the two groups on any of the variables was found (see Table 31). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. Only 9.2% of the variance in the three scales at time point two could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point two on any of the three scales when the three scales were analyzed individually (see Table 31). Bartlett's test confirmed that the role strain variables were dependent (correlated) variables.

When the RN students were divided into the three and four groups, as previoulsly described, and the preceeding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between

Table 31

Values for Group Effect for Role Strain Variables at Time Point Two

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.092	.111	.157
Approx F	2.065	1.192	1.123
Sig of F	.114	.315	.349
Wilks			
Value	.908	.890	.849
Approx F	2.065	1.195	1.115
Sig of F	.114	.313	.356
Eigenvalue			
Root No. 1	.102	.110	.116
Root No. 2		.012	.054
Root No. 3			.001
Cannonical Corr			
Root No. 1	.304	.315	.323
Root No. 2		.108	.227
Root No. 3			.036
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.908	.890	.849
F Value	2.065	1.195	1.115
Sig of F	.114	.313	.356
Roots		2 to 2	2 to 3
Value		.988	.947
F Value		.363	.826
Sig of F		.697	.511
Roots			3 to 3
Value			.999
F Value			.079
Sig of F			.779

(1) All values are rounded to three decimal places

Table 31 (continued)

Values for Group Effect for Role Strain Variables at Time Point Two

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(1,63)	(2,62)	(3,61)
Anxiety			
Hypothesis SS	398.491	591.066	594.850
Error SS	10258.124	10065.549	10061.766
F value	2.447	1.820	1.202
Sig of F	.123	.171	.317
Hostility			
Hypothesis SS	132.509	135.403	487.567
Error SS	6829.430	6826.535	6474.371
F value	1.222	.615	1.531
Sig of F	.273	.544	.215
Depression			
Hypothesis SS	.232	26.492	146.032
Error SS	3639.214	3612.954	3493.414
F value	.004	.227	.850
Sig of F	.950	.797	.472
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.034	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion With D. F.	2.819 (3,63)	2.786 (3,62)	2.880 (3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

the three groups or the four groups on any of the role strain variables at time point two, when the role strain variables were analyzed simultaneously (see Table 31). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated for both the three groups and four groups of RN students. Only 5.6% of the variance in the three scales at time point two could be attributed to group membership with the RN students divided into three groups and only 5.2% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point two on any of the three scales when the three scales were analyzed individually (see Table 31). Bartlett's test confirmed that

the role strain variables were dependent in both the three and four groups of RN students.

At time point three, two-thirds of the way through the term, when the mean scores on the role strain variables of the RN students divided into two groups were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 32). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. Only 4.3% of the variance in the three scales at time point three could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point three on any of the three scales when the three scales were analyzed individually (see Table 32). Bartlett's test confirmed that the role strain variables were dependent (correlated) variables.

Table 32

Values for Group Effect for Role Strain Variables at Time Point Three

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.043	.050	.096
Approx F	.904	.524	.675
Sig of F	.445	.789	.731
Wilks			
Value	.957	.950	.906
Approx F	.904	.519	.659
Sig of F	.445	.793	.745
Eigenvalue			
Root No. 1	.044	.044	.060
Root No. 2		.008	.028
Root No. 3			.013
Cannonical Corr			
Root No. 1	.206	.206	.238
Root No. 2		.088	.164
Root No. 3			.113
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.957	.950	.906
F Value	.904	.519	.659
Sig of F	.445	.793	.745
Roots		2 to 2	2 to 3
Value		.992	.961
F Value		.236	.610
Sig of F		.790	.656
Roots			3 to 3
Value			.987
F Value			.794
Sig of F			.376

(1) All values are rounded to three decimal places

Table 32 (continued)

Values for Group Effect for Role Strain Variables at Time Point Three

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(1,63)	(2,62)	(3,61)
Anxiety			
Hypothesis SS	92.840	113.923	278.127
Error SS	11567.560	11546.477	11382.273
F value	.506	.306	.497
Sig of F	.480	.738	.686
Hostility			
Hypothesis SS	3.576	18.427	169.428
Error SS	6745.039	6730.188	6579.187
F value	.033	.085	.524
Sig of F	.856	.919	.668
Depression			
Hypothesis SS	26.327	38.470	134.327
Error SS	6655.919	6643.777	6547.919
F value	.249	.180	.417
Sig of F	.619	.836	.741
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.034	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	1.738	1.738	1.738
With D. F.	(3,63)	(3,62)	(3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

When the RN students were divided into the three and four groups, as previoulsly described, and the preceeding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the role strain variables at time point three, when the role strain variables were analyzed simultaneously (see Table 32). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated for both the three groups and four groups of RN students. Only 2.5% of the variance in the three scales at time point three could be attributed to group membership with the RN students divided into three groups and only 3.2% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected, the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four

groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point three on any of the three scales when the three scales were analyzed individually (see Table 32). Bartlett's test confirmed that the role strain variables were dependent in both the three and four groups of RN students.

When the mean scores at time point four, the last week of the term, of the two groups, on the role strain variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 33). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. Only 1.8% of the variance in the three scales at time point four could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point four on any of the three

Table 33

Values for Group Effect for Role Strain Variables at Time Point Four

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.018	.069	.192
Approx F	.383	.729	1.389
Sig of F	.766	.627	.196
Wilks			
Value	.982	.931	.816
Approx F	.383	.725	1.388
Sig of F	.766	.630	.199
Eigenvalue			
Root No. 1	.019	.066	.149
Root No. 2		.007	.065
Root No. 3			.003
Cannonical Corr			
Root No. 1	.136	.249	.358
Root No. 2		.084	.246
Root No. 3			.058
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.982	.931	.816
F Value	.383	.725	1.388
Sig of F	.766	.630	.199
Roots		2 to 2	2 to 3
Value		.993	.936
F Value		.216	1.004
Sig of F		.807	.408
Roots			3 to 3
Value			.997
F Value			.205
Sig of F			.652

(1) All values are rounded to three decimal places

Table 33 (continued)

Values for Group Effect for Role Strain Variables at Time Point Four

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(1,63)	(2,62)	(3,61)
Anxiety			
Hypothesis SS	71.290	362.840	615.933
Error SS	8176.710	7885.160	7632.067
F value	.549	1.426	1.641
Sig of F	.461	.248	.189
Hostility			
Hypothesis SS	10.496	92.211	551.825
Error SS	7699.442	7617.727	7158.114
F value	.086	.375	1.568
Sig of F	.770	.689	.206
Depression			
Hypothesis SS	4.023	11.681	578.764
Error SS	5077.361	5069.704	4502.621
F value	.050	.071	2.614
Sig of F	.824	.931	.059
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.034	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	1.610	1.555	1.695
With D. F.	(3,63)	(3,62)	(3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

scales when the three scales were analyzed individually (see Table 33). Bartlett's test confirmed that the role strain variables were dependent (correlated) variables.

When the RN students were divided into the three and four groups, as previoulsly described, and the preceeding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the role strain variables at time point four, when the role strain variables were analyzed simultaneously (see Table 33). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated for both the three groups and four groups of RN students. Only 3.5% of the variance in the three scales at time point four could be attributed to group membership with the RN students divided into three groups and only 6.4% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly

different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point four on any of the three scales when the three scales were analyzed individually (see Table 33). Bartlett's test confirmed that the role strain variables were dependent in both the three and four groupings of RN students. The difference between the four groups of RN students on the depression scale did approach significance at .059, but since the role strain variables are dependent, even this approach to significance could not be considered valid (Bray & Maxwell, 1985, p. 40; SPSS Inc., 1983, p. 524).

There was no significant difference, at any of the four points in time, on the role strain variables, between any of the groupings of the RN students.

3. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different across four time points during the term? The analysis was first performed with all groups of RN students in the analysis. When the mean scores on the three role strain variables, across the two groups of RN students, of the four points in

time, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four points in time on at least one of the role strain variables (see Table 34). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 7.2%. The dimension reduction analysis revealed that only the third variate was not significantly different between the four points in time, at the .05 level.

The univariate F tests seemed to indicate that all three role strain variables contributed to the significant multivariate test statistics (see Table 34). All three scales showed a significant difference, at the .05 level, between the four points in time, when the scales were analyzed individually. This finding must be viewed cautiously since both the conditions necessary for the univariate approach were not met. Bartlett's test revealed that the three scales were correlated.

To determine if the preceding situation held for the RN students taking non-nursing courses, this group was

Table 34

Values for Time Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.215	.183	.188
Approx F	4.860	4.035	4.087
Sig of F	.000	.000	.000
Wilks			
Value	.797	.825	.819
Approx F	4.956	4.105	4.195
Sig of F	.000	.000	.000
Eigenvalue			
Root No. 1	.137	.129	.159
Root No. 2	.105	.074	.054
Root No. 3	.000	.000	.000
Cannonical Corr			
Root No. 1	.347	.338	.370
Root No. 2	.308	.262	.226
Root No. 3	.008	.013	.006
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 3	1 to 3
Value	.797	.825	.819
F Value	4.956	4.105	4.195
Sig of F	.000	.000	.000
Roots	2 to 3	2 to 3	2 to 3
Value	.905	.931	.949
F Value	4.792	3.367	2.420
Sig of F	.001	.010	.048
Roots	3 to 3	3 to 3	3 to 3
Value	1.000	1.000	1.000
F Value	.011	.033	.007
Sig of F	.916	.857	.933

(1) All values are rounded to three decimal places

Table 34 (continued)

Values for Time Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(3,189)	(3,186)	(3,183)
Anxiety			
Hypothesis SS	1890.860	1648.811	1743.138
Error SS	14161.625	13813.201	13182.852
F value	8.412	7.401	8.066
Sig of F	.000	.000	.000
Hostility			
Hypothesis SS	270.881	177.913	164.049
Error SS	3145.227	3108.464	2893.967
F value	5.426	3.549	3.458
Sig of F	.001	.016	.018
Depression			
Hypothesis SS	340.745	246.460	228.994
Error SS	4686.009	4642.206	4294.216
F value	4.581	3.292	3.253
Sig of F	.004	.022	.023
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.030	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	4.503	4.444	4.555
With D. F.	(3,189)	(3,186)	(3,183)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

analyzed alone. When the mean scores on the three role strain variables for the four points in time during the term for the RN students taking non-nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four points in time on at least one of the role strain variables (see Table 35). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 5.4%. The dimension reduction analysis revealed that only the third variate was not significantly different between the four points in time, at the .05 level.

The univariate F tests seemed to indicate that all three role strain variables contributed to the significant multivariate test statistics (see Table 35). All three scales showed a significant difference, at the .05 level, between the four points in time for the RN students taking non-nursing courses, with the RN students divided into two groups, when the scales were analyzed individually. This finding must be viewed cautiously since Bartlett's test

Table 35

Values for Time Effect for Role Strain Variables for Each of Two Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=34)
Multivariate Tests of Significance		
Pillais		
Value	.161	.116
Approx F	3.584	2.542
Sig of F	.000	.007
Wilks		
Value	.845	.886
Approx F	3.633	2.579
Sig of F	.000	.007
Eigenvalue		
Root No. 1	.112	.099
Root No. 2	.064	.027
Root No. 3	.001	.000
Cannonical Corr		
Root No. 1	.318	.300
Root No. 2	.245	.161
Root No. 3	.023	.008
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.845	.886
F Value	3.633	2.579
Sig of F	.000	.007
Roots	2 to 3	2 to 3
Value	.940	.974
F Value	2.979	1.249
Sig of F	.019	.290
Roots	3 to 3	3 to 3
Value	.999	1.000
F Value	.097	.012
Sig of F	.756	.913

(1) All values are rounded to three decimal places

Table 35 (continued)

Values for Time Effect for Role Strain Variables for Each of Two Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=34)
Univariate F tests With D. F.	(3,189)	(3,189)
Anxiety		
Hypothesis SS	892.089	1104.787
Error SS	14161.625	14161.625
F value	3.969	4.915
Sig of F	.009	.003
Hostility		
Hypothesis SS	330.677	83.846
Error SS	3145.227	3145.227
F value	6.624	1.679
Sig of F	.000	.173
Depression		
Hypothesis SS	222.903	127.088
Error SS	4686.009	4686.009
F value	2.997	1.709
Sig of F	.032	.167
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.313	1.313
Approx p	.034	.034
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	4.503	4.503
With D. F.	(3,189)	(3,189)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)

revealed that the three scales were correlated.

When the RN students were divided into the three groups and the mean scores of the four points in time, on the three role strain variables, across the three groups of RN students were analyzed, the results were essentially the same as when the analysis was done across the two groups (see Table 34).

When the RN students were divided into the three previously described groups and the RN students taking non-nursing courses were again analyzed alone, the results were essentially the same (see Table 36) as when they were a part of the RN students divided into two groups (see Table 35), as described in the preceding section.

When the RN students were divided into the four groups and the mean scores of the four points in time, on the three role strain variables, across the four groups of RN students were analyzed, the results were essentially the same as when the analysis was done across the two groups and three groups (see Table 34).

Again, when the RN students were divided into the four previously described groups and the RN students taking non-nursing courses were analyzed alone, the results were essentially the same (see Table 37) as when they were a part

of the RN students divided into the two groups (see Table 35) and into the three groups (see Table 36).

Table 36

Values for Time Effect for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Clinical (n=20)
Multivariate Tests of Significance			
Pillais			
Value	.164	.051	.115
Approx F	3.585	1.066	2.481
Sig of F	.000	.386	.009
Wilks			
Value	.842	.950	.887
Approx F	3.634	1.069	2.514
Sig of F	.000	.385	.008
Eigenvalue			
Root No. 1	.114	.046	.096
Root No. 2	.065	.004	.027
Root No. 3	.001	.002	.001
Cannonical Corr			
Root No. 1	.319	.210	.297
Root No. 2	.248	.066	.162
Root No. 3	.023	.049	.035
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 3	1 to 3
Value	.842	.950	.887
F Value	3.634	1.069	2.514
Sig of F	.000	.385	.008
Roots	2 to 3	2 to 3	2 to 3
Value	.938	.993	.973
F Value	3.003	.310	1.296
Sig of F	.018	.871	.271
Roots	3 to 3	3 to 3	3 to 3
Value	.999	.998	.999
F Value	.097	.441	.222
Sig of F	.756	.508	.638

Table 36 (continued)

Values for Time Effect for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=20)
Univariate F tests With D. F.	(3,186)	(3,186)	(3,186)
Anxiety			
Hypothesis SS	892.089	393.911	1059.300
Error SS	13813.201	13813.201	13813.201
F value	4.004	1.768	4.755
Sig of F	.009	.155	.003
Hostility			
Hypothesis SS	330.677	19.571	101.038
Error SS	3108.464	3108.464	3108.464
F value	6.596	.390	2.015
Sig of F	.000	.760	.113
Depression			
Hypothesis SS	222.903	18.054	152.838
Error SS	4642.206	4642.206	4642.206
F value	2.977	.241	2.041
Sig of F	.033	.868	.110
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.271	1.271	1.271
Approx p	.014	.014	.014
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion With D. F.	4.444 (3,186)	4.444 (3,186)	4.444 (3,186)

(1) All values are rounded to three decimal places
(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)

Table 37

Values for Time Effect for Role Strain Variables for Each of Four Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Multivariate Tests of Significance		
Pillais		
Value	.172	.040
Approx F	3.709	.814
Sig of F	.000	.603
Wilks		
Value	.835	.961
Approx F	3.766	.814
Sig of F	.000	.606
Eigenvalue		
Root No. 1	.120	.035
Root No. 2	.068	.006
Root No. 3	.001	.000
Cannonical Corr		
Root No. 1	.328	.184
Root No. 2	.253	.075
Root No. 3	.023	.011
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.835	.961
F Value	3.766	.814
Sig of F	.000	.604
Roots	2 to 3	2 to 3
Value	.936	.994
F Value	3.085	.260
Sig of F	.016	.903
Roots	3 to 3	3 to 3
Value	.999	1.000
F Value	.098	.022
Sig of F	.754	.883

(1) All values are rounded to three decimal places

Table 37 (continued)

Values for Time Effect for Role Strain Variables for Each of Four Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(3,183)	(3,183)
Anxiety		
Hypothesis SS	892.089	289.944
Error SS	13182.852	13182.852
F value	4.128	1.342
Sig of F	.007	.262
Hostility		
Hypothesis SS	330.677	19.042
Error SS	2893.967	2893.967
F value	6.970	.401
Sig of F	.000	.752
Depression		
Hypothesis SS	222.903	20.944
Error SS	4294.216	4294.216
F value	3.166	.298
Sig of F	.026	.827
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	4.555	4.555
With D. F.	(3,183)	(3,183)

(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

Table 37 (continued)

Values for Time Effect for Role Strain Variables for Each of Four Groups of RN Students

	Groups	
	Nursing Courses Second/Third (n=9)	Nursing Courses Fourth (n=7)
Multivariate Tests of Significance		
Pillais		
Value	.179	.074
Approx F	3.879	1.544
Sig of F	.000	.129
Wilks		
Value	.826	.927
Approx F	4.014	1.559
Sig of F	.000	.125
Eigenvalue		
Root No. 1	.173	.069
Root No. 2	.028	.008
Root No. 3	.005	.001
Cannonical Corr		
Root No. 1	.384	.254
Root No. 2	.165	.092
Root No. 3	.070	.033
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.826	.927
F Value	4.014	1.559
Sig of F	.000	.125
Roots	2 to 3	2 to 3
Value	.968	.991
F Value	1.494	.434
Sig of F	.203	.784
Roots	3 to 3	3 to 3
Value	.995	.999
F Value	.907	.194
Sig of F	.342	.661

(1) All values are rounded to three decimal places

Table 37 (continued)

Values for Time Effect for Role Strain Variables for Each of Four Groups of RN Students

	Groups	
	Nursing Courses Second/Third (n=9)	Nursing Courses Fourth (n=7)
Univariate F tests		
With D. F.	(3,183)	(3,183)
Anxiety		
Hypothesis SS	1459.222	334.393
Error SS	13182.852	13182.852
F value	6.752	1.547
Sig of F	.000	.204
Hostility		
Hypothesis SS	275.778	40.286
Error SS	2893.967	2893.967
F value	5.813	.849
Sig of F	.001	.469
Depression		
Hypothesis SS	444.222	53.714
Error SS	4294.216	4294.216
F value	6.310	.763
Sig of F	.000	.516
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	4.555	4.555
With D. F.	(3,183)	(3,183)

(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

For the RN students taking non-nursing courses, there was a significant difference, on the role strain variables, between the four points in time during the term when they were a part of the two, three, and four groupings of RN students.

4. For RN students in a BSN program taking nursing courses, is the amount of role strain different across four time points during the term? All the RN students taking nursing courses were analyzed alone. When the mean scores on the three role strain variables for the four points in time during the term for the RN students taking nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four points in time on at least one of the role strain variables (see Table 35). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 3.9%. The dimension reduction analysis revealed that only the first variate was significantly different between the four points in time, at the .05 level.

The univariate F tests seem to indicate that only the anxiety scale contributed to the significant multivariate test statistics (see Table 35). Only the anxiety scale showed a significant difference, at the .05 level, between the four points in time for the RN students taking nursing courses, with the RN students divided into two groups, when the scales were analyzed individually. This finding must be viewed cautiously since Bartlett's test revealed that the three scales were correlated.

With the RN students divided into the three previously described groups, the two groups of RN students taking nursing courses within this grouping were each analyzed alone. When the mean scores on the three role strain variables for the four points in time during the term for the RN students taking their first nursing theory course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the role strain variables (see Table 36). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was only 1.7%. The dimension

reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the three role strain variables, for the RN students taking their first nursing theory course, were analyzed individually, there was no significant difference, at the .05 level, between the four points in time during the term (see Table 36). This was to be expected since the multivariate statistics were not significant. Bartlett's test confirmed that the role strain variables were correlated.

When the mean scores on the three role strain variables, for the four points in time during the term, for the RN students taking their first nursing clinical course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four points in time on at least one of the role strain variables (see Table 36). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 3.8%. The dimension reduction analysis revealed that only the first variate was

significantly different between the four points in time, at the .05 level.

The univariate F tests seem to indicate that only the anxiety scale contributed to the significant multivariate test statistics (see Table 36). Only the anxiety scale showed a significant difference, at the .05 level, between the four points in time for the RN students taking their first nursing clinical course, with the RN students divided into three groups, when the scales were analyzed individually. This finding must be viewed cautiously since Bartlett's test revealed that the three scales were correlated.

With the RN students divided into the four previously described groups, the three groups of RN students taking nursing courses within this grouping were each analyzed alone. When the mean scores on the three role strain variables, for the four points in time during the term for the RN students taking their first nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the role strain variables (see Table 37). The values and the approximate F<u>s</u> of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M

revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was only 1.3%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the three role strain variables, for the RN students taking their first nursing course, were analyzed individually, there was no significant difference, at the .05 level, between the four points in time during the term (see Table 37). This was to be expected since the multivariate statistics were not significant. Bartlett's test confirmed that the role strain variables were correlated.

When the mean scores on the three role strain variables, for the four points in time during the term, for the RN students taking their second or third nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four points in time on at least one of the role strain variables (see Table 37). The values and the approximate F<u>s</u> of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity

- of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 6.0%. The dimension reduction analysis revealed that only the first variate was significantly different between the four points in time, at the .05 level.

The univariate F tests seem to indicate that all the role strain variables contributed to the significant multivariate test statistics (see Table 37). All three scales showed a significant difference, at the .05 level, between the four points in time for the RN students taking their second or third nursing course, with the RN students divided into four groups, when the scales were analyzed individually. This finding must be viewed cautiously since Bartlett's test revealed that the three scales were correlated.

When the mean scores on the three role strain variables for the four points in time during the term for the RN students taking their fourth nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the role strain variables (see Table 37). The values and the approximate F*s* of the test statistics Pillai-Bartlett trace and Wilks'

lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to point in time during the term was only 2.5%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the three role strain variables, for the RN students taking their fourth nursing course, were analyzed individually, there was no significant difference, at the .05 level, between the four points in time during the term (see Table 37). This was to be expected since the multivariate statistics were not significant. Bartlett's test confirmed that the role strain variables were correlated.

There was no significant difference, across the four points in time, on the role strain variables, for the RN students taking their first nursing theory course, their first nursing course, or their fourth nursing course. There was a significant difference when all the RN students taking nursing courses were considered as one group and when only those taking their first nursing clinical course were considered as one group. The state anxiety scale seemed to be the contributing variable to this significance for both

of the groupings. There was also a significant difference for those taking their second or third nursing course. All of the role strain variables seemed to contribute to this significance.

The possible interaction of the factors of group and time were also investigated. When the mean scores on the three role strain variables, for the two groups of RN students and the four points in time during the term, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant interaction between group and time (see Table 38). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to interaction of the factors was only 2.0%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate statistics seemed to indicate that there was a significant interaction, at the .05 level, between the factors of group and time on the Hostility Inventory scale, when the scales were analyzed individually with the RN students divided into two groups (see Table 38

Table 38

Values for Group by Time Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Multivariate Tests of Significance			
Pillais			
Value	.061	.108	.229
Approx F	1.299	1.155	1.683
Sig of F	.234	.295	.018
Wilks			
Value	.940	.895	.784
Approx F	1.309	1.155	1.701
Sig of F	.230	.295	.016
Eigenvalue			
Root No. 1	.058	.074	.165
Root No. 2	.004	.031	.071
Root No. 3	.002	.009	.022
Cannonical Corr			
Root No. 1	.235	.262	.376
Root No. 2	.062	.173	.257
Root No. 3	.040	.096	.147
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 3	1 to 3
Value	.940	.895	.784
F Value	1.309	1.155	1.701
Sig of F	.230	.295	.016
Roots	2 to 3	2 to 3	2 to 3
Value	.995	.961	.914
F Value	.260	.741	1.049
Sig of F	.904	.686	.404
Roots	3 to 3	3 to 3	3 to 3
Value	.998	.991	.979
F Value	.309	.432	.574
Sig of F	.579	.785	.776

(1) All values are rounded to three decimal places

Table 38 (continued)

Values for Group by Time Effect for Role Strain Variables

	Number of Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
Univariate F tests With D. F.	(3,189)	(6,186)	(9,183)
Anxiety			
Hypothesis SS	96.199	444.623	1074.971
Error SS	14161.625	13813.201	13182.852
F value	.428	.998	1.658
Sig of F	.733	.428	.102
Hostility			
Hypothesis SS	155.035	191.798	406.294
Error SS	3145.227	3108.464	2893.967
F value	3.105	1.913	2.855
Sig of F	.028	.081	.004
Depression			
Hypothesis SS	13.668	57.471	405.461
Error SS	4686.009	4642.206	4294.216
F value	.184	.384	1.920
Sig of F	.907	.889	.052
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.313	1.271	1.387
Approx p	.030	.014	.015
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion With D. F.	4.503 (3,189)	4.444 (3,186)	4.555 (3,183)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

and Figure 2). But one must view this finding of questionable validity since the overall MANOVA was not significant. It must be remembered that the "univariate tests are insensitive to the correlations among the variables," and these variables were correlated, as evidenced by the significant Bartlett test (see Table 38) (Bray & Scott, 1985, p. 40). Also, the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made.

With the RN students divided into the three groups, and the mean scores on the three role strain variables analyzed simultaneously by repeated measures multivariate analysis of variance over the four points in time, there was no significant interaction between group and time (see Table 38). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to interaction of the factors was only 3.6%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate statistics also revealed that there was

no significant interaction, at the .05 level, between the factors of group and time on any of the three scales when the scales were analyzed individually with the RN students divided into the three groups (see Table 38). Bartlett's test confirmed that the role strain variables were dependent.

When the RN students were divided into the four groups, and the mean scores on the three role strain variables were analyzed simultaneously by repeated measures multivariate analysis of variance over the four points in time, there was a significant interaction between group and time (see Table 38). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the three scales that could be attributed to interaction of the factors was 7.3%. The dimension reduction analysis revealed that only the first dimension was significant, at the .05 level, in the interaction of the factors of group and time.

The univariate statistics seemed to indicate that the significant interaction between the factors of group and time on the hostility scale contributed to the overall MANOVA significant interaction of group and time, when the

scales were analyzed individually with the RN students divided into four groups (see Table 38 and Figure 8). Bartlett's test confirmed that the role strain variables were correlated.

5. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different for time point one and time point four during the term? When the mean scores on the three role strain variables, for the four points in time during the term, for the RN students taking non-nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, the second orthonormalized contrast was between time point one (the first week of the term) and time point four (the last week of the term). With the RN students divided into two groups, this contrast was significant at the .05 level for the state anxiety scale but not for the hostility or depression scales (see Table 39 and Figures 1, 2, and 3).

With the RN students divided into the three groups, this contrast was again significant at the .05 level for the state anxiety scale but not for the hostility or depression scale (see Table 40 and Figures 4, 5, and 6).

When the RN students were divided into the four groups, this contrast was also significant at the .05 level for the state anxiety scale, but, again, not for the

Table 39

Values for Contrast of Time One With Time Four for Each of Two Groups of RN Students for Role Strain Variables

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=34)
Univariate F tests		
With D. F.	(1,63)	(1,63)
Anxiety		
Hypothesis SS	632.323	673.471
Error SS	6501.207	6501.207
F value	6.128	6.526
Sig of F	.016	.013
Hostility		
Hypothesis SS	28.452	29.779
Error SS	1327.269	1327.269
F value	1.350	1.414
Sig of F	.250	.239
Depression		
Hypothesis SS	12.645	1.779
Error SS	1579.075	1579.075
F value	.505	.071
Sig of F	.480	.791
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.313	1.313
Approx p	.034	.034
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	8.268	8.268
With D. F.	(9,63)	(9,63)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)

Table 40

Values for Contrast of Time One With Time Four for Each of Three Groups of RN Students for Role Strain Variables

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=20)
Univariate F tests With D. F.	(1,62)	(1,62)	(1,62)
Anxiety			
Hypothesis SS	632.323	308.893	366.025
Error SS	6499.760	6499.760	6499.760
F value	6.032	2.946	3.491
Sig of F	.017	.091	.066
Hostility			
Hypothesis SS	28.452	.321	57.600
Error SS	1299.127	1299.127	1299.127
F value	1.358	.015	2.749
Sig of F	.248	.902	.102
Depression			
Hypothesis SS	12.645	1.286	7.225
Error SS	1572.344	1572.344	1572.344
F value	.499	.051	.285
Sig of F	.483	.823	.595
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.271	1.271	1.271
Approx p	.014	.014	.014
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion With D. F.	8.391 (9,62)	8.391 (9,62)	8.391 (9,62)

(1) All values are rounded to three decimal places
(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)

Table 41

Values for Contrast of Time One With Time Four for Each of Four Groups of RN Students for Role Strain Variables

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(1,61)	(1,61)
Anxiety		
Hypothesis SS	632.323	289.000
Error SS	6290.503	6290.503
F value	6.132	2.802
Sig of F	.016	.099
Hostility		
Hypothesis SS	28.452	4.000
Error SS	1145.183	1145.183
F value	1.516	.213
Sig of F	.223	.646
Depression		
Hypothesis SS	12.645	.694
Error SS	1433.875	1433.875
F value	.538	.030
Sig of F	.466	.864
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion With D. F.	8.411 (9,61)	8.411 (9,61)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

Table 41 (continued)

Values for Contrast of Time One With Time Four for Each of Four Groups of RN Students for Role Strain Variables

	Groups	
	Nursing Courses Second/Third (n=9)	Nursing Courses Fourth (n=7)
Univariate F tests With D. F.	(1,61)	(1,61)
Anxiety		
Hypothesis SS	589.389	5.786
Error SS	6290.503	6290.503
F value	5.715	.056
Sig of F	.020	.814
Hostility		
Hypothesis SS	206.722	1.143
Error SS	1145.183	1145.183
F value	11.011	.061
Sig of F	.002	.806
Depression		
Hypothesis SS	98.000	48.286
Error SS	1433.875	1433.875
F value	4.169	2.054
Sig of F	.045	.157
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	8.411	8.411
With D. F.	(9,61)	(9,61)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

hostility or depression scale (see Table 41 and Figures 7, 8, and 9).

The RN students taking non-nursing courses had significantly less anxiety at the end of the term than at the beginning, but there was no difference in hostility or depression. This finding held whether the RN students taking non-nursing courses were a part of the two, three, or four groupings of RN students.

6. For RN students in a BSN program taking nursing courses, is the amount of role strain different for time point one and time point four during the term? When the mean scores on the three role strain variables, for the four points in time during the term, for the RN students taking nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, the first orthonormalized contrast was between time point one (the first week of the term) and time point four (the last week of the term). With the RN students divided into two groups, this contrast was significant at the .05 level for the state anxiety scale but not for the hostility or depression scales (see Table 39 and Figures 1, 2, and 3).

With the RN students divided into the three groups, this contrast was not significantly different at the .05 level for any of the role strain variables for either the RN

students taking their first nursing theory course or their first nursing clinical course (see Table 40 and Figures 4, 5, and 6).

With the RN students divided into the four groups, this contrast was significantly different at the .05 level for only the RN students taking their second or third nursing course and for all three role strain variables for this sub-group (see Table 41 and Figures 7, 8, and 9).

The RN students taking nursing courses, with the RN students divided into the two groupings, had significantly less anxiety at the end of the term than at the beginning, but there was no difference in hostility or depression. With the RN students taking nursing courses divided into those taking their first nursing theory course and those taking their first nursing clinical course, there was no significant difference between the beginning and end of the term in state anxiety, hostility, or depression for either grouping. When the RN students taking nursing courses were divided into those taking their first nursing course, those taking their second or third nursing course, and those taking their fourth nursing course, only the grouping taking their second or third nursing course showed a significant difference between the first week and the last week of the term on the role strain variables, and this grouping showed

a difference on all three role strain variables (state anxiety, hostility, and depression). This difference was a decrease in all three role strain variables at the end of the term in comparison with the beginning of the term.

7. For RN students in a BSN program taking non-nursing courses, is there a pattern to role strain across the four time points during the term? Orthogonal polynomial contrasts were used for the multivariate analysis of variance to determine if there was a significant linear, quadratic, or cubic trend of any of the role strain variables across the four points in time for the RN students taking non-nursing courses (Kirk, 1968, pp. 70-73, 114-127; Norusis, 1985, p. 268).

The analysis on the RN students taking non-nursing courses was first performed with the RN students divided into the two previously described groups. For state anxiety, only the cubic component of the trend was significant at the .05 level (see Table 42 and Figure 1). For hostility, both the linear and cubic trend were significant at the .05 level (see Table 42 and Figure 2). Only the cubic trend was significant ,at the .05 level, for depression (see Table 42 and Figure 3).

With the RN students divided into the three previously described groups, the RN students taking non-nursing courses

Table 42

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Two Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=34)
Univariate F tests With D. F.	(1,63)	(1,63)
Anxiety		
Linear		
Hypothesis SS	401.615	574.449
Error SS	7067.837	7067.837
F value	3.580	5.120
Sig of F	.063	.027
Quadratic		
Hypothesis SS	114.202	427.066
Error SS	4294.232	4294.232
F value	1.675	6.265
Sig of F	.200	.015
Cubic		
Hypothesis SS	376.273	103.272
Error SS	2799.555	2799.555
F value	8.467	2.324
Sig of F	.005	.132
Hostility		
Linear		
Hypothesis SS	110.716	14.413
Error SS	1482.321	1482.321
F value	4.706	.613
Sig of F	.034	.437
Quadratic		
Hypothesis SS	3.903	35.007
Error SS	729.339	729.339
F value	.337	3.024
Sig of F	.564	.087
Cubic		
Hypothesis SS	216.058	34.425
Error SS	933.567	933.567
F value	14.580	2.323
Sig of F	.000	.132

Table 42 (continued)

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Two Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=34)
Depression		
Linear		
Hypothesis SS	.781	2.847
Error SS	2212.972	2212.972
F value	.022	.081
Sig of F	.882	.777
Quadratic		
Hypothesis SS	29.032	38.118
Error SS	833.850	833.850
F value	2.193	2.880
Sig of F	.144	.095
Cubic		
Hypothesis SS	193.090	86.124
Error SS	1639.186	1639.186
F value	7.421	3.310
Sig of F	.008	.074
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.313	1.313
Approx p	.034	.034
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	9.691	9.691
With D. F.	(9,63)	(9,63)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)

again showed a significant cubic component trend, at the .05 level, for state anxiety (see Table 43 and Figure 4). As in the previous grouping, for hostility both the linear and cubic trend were significant at the .05 level (see Table 43 and Figure 5). As before, only the cubic trend was significant at the .05 level for depression (see Table 43 and Figure 6).

When the RN students taking non-nursing courses were one of the groups making up the four groups of RN students, the results of the orthogonal polynomial contrasts were the same as when they were a part of the three groups and two groups of RN students (see Table 44 and Figures 7, 8, and 9)

For RN students taking non-nursing courses, the pattern across the four points in time during the term was cubic for state anxiety, linear and cubic for hostility, and cubic for depression.

Table 43

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Three groups of RN Students Across the Four Points in Time

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Clinical (n=20)
Univariate F tests With D. F.	(1,62)	(1,62)	(1,62)
Anxiety			
Linear			
Hypothesis SS	401.615	377.232	225.000
Error SS	7040.053	7040.053	7040.053
F value	3.537	3.322	1.982
Sig of F	.065	.073	.164
Quadratic			
Hypothesis SS	114.202	9.446	594.050
Error SS	4117.802	4117.802	4117.802
F value	1.719	.142	8.944
Sig of F	.195	.707	.004
Cubic			
Hypothesis SS	376.273	7.232	240.250
Error SS	2655.345	2655.345	2655.345
F value	8.786	.169	5.610
Sig of F	.004	.683	.021
Hostility			
Linear			
Hypothesis SS	110.716	3.214	41.603
Error SS	1451.917	1451.917	1451.917
F value	4.728	.137	1.777
Sig of F	.034	.712	.187
Quadratic			
Hypothesis SS	3.903	3.500	37.813
Error SS	723.034	723.034	723.034
F value	.335	.300	3.242
Sig of F	.565	.586	.077
Cubic			
Hypothesis SS	216.058	12.857	21.623
Error SS	933.512	933.512	933.512
F value	14.350	.854	1.436
Sig of F	.000	.359	.235

Table 43 (continued)

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Three groups of RN Students Across the Four Points in Time

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Clinical (n=20)
Depression			
Linear			
Hypothesis SS	.781	2.232	.903
Error SS	2212.685	2212.685	2212.685
F value	.022	.063	.025
Sig of F	.883	.803	.874
Quadratic			
Hypothesis SS	29.032	15.018	23.113
Error SS	833.837	833.837	833.837
F value	2.159	1.117	1.719
Sig of F	.147	.295	.195
Cubic			
Hypothesis SS	193.090	.804	128.823
Error SS	1595.684	1595.684	1595.684
F value	7.502	.031	5.005
Sig of F	.008	.860	.029
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.271	1.271	1.271
Approx p	.014	.014	.014
Statistics for Within Cells Corr			
Bartlett test (Sig)	.000	.000	.000
F(max) criterion	9.737	9.737	9.737
With D. F.	(9,62)	(9,62)	(9,62)

(1) All values are rounded to three decimal places
(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)

Table 44

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Four groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(1,61)	(1,61)
Anxiety		
Linear		
Hypothesis SS	401.615	253.344
Error SS	6981.007	6981.007
F value	3.509	2.214
Sig of F	.066	.142
Quadratic		
Hypothesis SS	114.202	.500
Error SS	3727.652	3727.652
F value	1.869	.008
Sig of F	.177	.928
Cubic		
Hypothesis SS	376.273	36.100
Error SS	2474.193	2474.193
F value	9.277	.890
Sig of F	.003	.349
Hostility		
Linear		
Hypothesis SS	110.716	9.669
Error SS	1337.385	1337.385
F value	5.050	.441
Sig of F	.028	.509
Quadratic		
Hypothesis SS	3.903	.347
Error SS	678.428	678.428
F value	.351	.031
Sig of F	.556	.860
Cubic		
Hypothesis SS	216.058	9.025
Error SS	878.154	878.154
F value	15.008	.627
Sig of F	.000	.432

Table 44 (continued)

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Four groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Depression		
Linear		
Hypothesis SS	.781	4.900
Error SS	2139.240	2139.240
F value	.022	.140
Sig of F	.882	.710
Quadratic		
Hypothesis SS	29.032	.000
Error SS	670.825	670.825
F value	2.640	.000
Sig of F	.109	1.000
Cubic		
Hypothesis SS	193.090	16.044
Error SS	1484.151	1484.151
F value	7.936	.659
Sig of F	.007	.420
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	10.407	10.407
With D. F.	(9,61)	(9,61)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

Table 44 (continued)

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Four groups of RN Students Across the Four Points in Time

	Groups	
	Nursing Courses Second/Third (n=9)	Nursing Courses Fourth (n=7)
Univariate F tests With D. F.	(1,61)	(1,61)
Anxiety		
Linear		
Hypothesis SS	381.356	26.579
Error SS	6981.007	6981.007
F value	3.332	.232
Sig of F	.073	.632
Quadratic		
Hypothesis SS	747.111	246.036
Error SS	3727.652	3727.652
F value	12.226	4.026
Sig of F	.001	.049
Cubic		
Hypothesis SS	330.756	61.779
Error SS	2474.193	2474.193
F value	8.155	1.523
Sig of F	.006	.222
Hostility		
Linear		
Hypothesis SS	149.422	.257
Error SS	1337.385	1337.385
F value	6.815	.012
Sig of F	.011	.914
Quadratic		
Hypothesis SS	49.000	36.571
Error SS	678.428	678.428
F value	4.406	3.288
Sig of F	.040	.075
Cubic		
Hypothesis SS	77.356	3.457
Error SS	878.154	878.154
F value	5.373	.240
Sig of F	.024	.626

Table 44 (continued)

Values for Orthogonal Polynomial Contrasts for Role Strain Variables for Each of Four groups of RN Students Across the Four Points in Time

	Groups	
	Nursing Courses Second/Third (n=9)	Nursing Courses Fourth (n=7)
Depression		
Linear		
Hypothesis SS	30.422	41.257
Error SS	2139.240	2139.240
F value	.867	1.176
Sig of F	.355	.282
Quadratic		
Hypothesis SS	196.000	5.143
Error SS	670.825	670.825
F value	17.823	.468
Sig of F	.000	.497
Cubic		
Hypothesis SS	217.800	7.314
Error SS	1484.151	1484.151
F value	8.952	.301
Sig of F	.004	.585
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.387	1.387
Approx p	.015	.015
Statistics for Within Cells Corr		
Bartlett test (Sig)	.000	.000
F(max) criterion	10.407	10.407
With D. F.	(9,61)	(9,61)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

8. For RN students in a BSN program taking nursing courses, is there a pattern to role strain across the four time points during the term? With the RN students taking nursing courses as a grouping of the previously described two groups, both the linear and quadratic components of the trend for state anxiety were significant at the .05 level (see Table 42 and Figure 1). For hostility and depression, none of the trends were significant (see Table 42 and Figures 2 and 3).

With the RN students divided into the three previously described groups, the RN students taking their first theoretical nursing course showed no significant trends for state anxiety, hostility , or depression (see Table 43 and Figures 4, 5, and 6). Those taking their first nursing clinical course showed a significant quadratic and cubic trend, at the .05 level, for state anxiety (see Table 43 and Figure 4). None of the trend components for hostility were significant (see Table 43 and Figure 5). For depression, the cubic trend was significant at the .05 level (see Table 43 and Figure 6).

When the RN students were divided into the previously described four groups, those RN students taking their first nursing course showed no significant trends for state anxiety, hostility, or depression (see Table 44 and Figures .

7, 8, and 9). Those taking their second or third nursing course showed both a quadratic and cubic significant trend, at the .05 level, for state anxiety and depression (see Table 44 and Figures 7 and 9). All three trends (linear, quadratic, and cubic) were significant, at the .05 level, for hostility (see Table 44 and Figure 8). Those RN students taking their fourth nursing course showed a significant quadratic trend for state anxiety, at the .05 level (see Table 44 and Figure 7). None of the trends were significant for hostility or depression (see Table 44 and Figures 8 and 9).

With the RN students divided into two groups, the only significant trends, for those RN students taking nursing courses, were the linear and quadratic components for state anxiety. When the RN students were divided into three groups, none of the trends were significant for those RN students taking their first theory nursing course. For those taking their first clinical nursing course, the quadratic component was significant for state anxiety and the cubic component for state anxiety and depression. With the RN students divided into four groups, none of the trends were significant for those RN students taking their first nursing course. For those taking their second or third nursing course, the linear component was significant for hostility and the quadratic and cubic components were

significant for state anxiety, hostility, and depression. For those RN students taking their fourth nursing course, the only component significant was the quadratic component for state anxiety.

9. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses? The following categorical, demographic or attribute variables were entered, one at a time, into the doubly multivariate repeated measures analysis of variance as factors, in addition to those of group and time: the type of RN/BSN program, time of day class was taken, length of academic term, strongest motivator for returning to school for the BSN, necessity of job change to return for the BSN, job title, clinical area of work, student and work status (full or part-time), role of significant other, wife / husband, roommate, or mother/father, age category of child (infant, preschool, grade school, junior high school, high school, young adult, or adult), and type of basic nursing program. The following ordinal, demographic variables were entered , all together, into the doubly multivariate repeated measures analysis of variance as constant covariates: degree of life style change since going back to school, amount of support and encouragement in returning to school from family, friends, and work peers, number of years

since graduated from basic nursing program, number of years worked in nursing, age, degree to which course met expectations, degree of relevancy of course to work situation, number of children, number of life roles, number of CEUs earned in the last year, and length of time to complete questionnaire.

With the RN students divided into the previously described two groups, the only demographic variable that influenced a differentiation between the two groups was the time of day the class was taken. When the mean scores of the role strain variables, across time, of the two groups, by the time of day the RN student was taking the class in each group, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the two groups on at least one of the role strain variables (see Table 45). The values and the approximate Fs of the test statistics Pillai - Bartlett trace and Wilk's lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. The percentage of variance in the three scales that could be attributed to group membership was 16.6%. The dimension reduction analysis revealed that the eigenvalue was significantly different from 0, at the .05 level.

Table 45

Values for Group Effect for Role Strain Variables with Time of Class

	Number of Groups
	Two (N=65)
Multivariate Tests of Significance	
Pillais	
Value	.166
Approx F	3.902
Sig of F	.013
Wilks	
Value	.834
Approx F	3.902
Sig of F	.013
Eigenvalue	
Root No. 1	.198
Cannonical Corr	
Root No. 1	.407
Dimension Reduction Analysis	
Wilks lambda	
Roots	1
Value	.834
F Value	3.902
Sig of F	.013

(1) All values are rounded to three decimal places

Table 45 (continued)

Values for Group Effect for Role Strain Variables with Time of Class

	Number of Groups
	Two (N=65)
Univariate F tests With D. F.	(1,61)
Anxiety	
Hypothesis SS	1627.267
Error SS	23660.913
F value	4.195
Sig of F	.045
Hostility	
Hypothesis SS	947.386
Error SS	21985.694
F value	2.629
Sig of F	.110
Depression	
Hypothesis SS	3.353
Error SS	12652.670
F value	.016
Sig of F	.899
Multivariate Test for Homogeneity of Dispersion Matrices	
Boxs M	
F value	1.250
Approx p	.020
Statistics for Within Cells Corr	
Bartlett test	
Sig	.000
F(max) criterion	1.870
With D. F.	(3,61)

(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)

The univariate F tests seemed to indicate that state anxiety had contributed to the significant multivariate test statistics (see Table 45). The anxiety scale showed a significant difference, at the .05 level, when the scales were analyzed individually, between the two groups with the RN students in each group classified as to the time of day that they took their class. This finding must be viewed cautiously since both the conditions necessary for the univariate approach were not met. Bartlett's test revealed that the three scales were correlated. But, when the means of the trait anxiety scale, classified by group, point in time, and time of day the class was taken were examined, it was noted that the RN students taking nursing courses during the day consistently had higher scores, regardless of point in time, than any other classification cell (see Table 46).

With the RN students divided into the previously described three groups, none of the demographic variables, when entered into the analysis, resulted in a significant difference between the three groups.

When the RN students were divided into the previously described four groups, the only demographic variable that influenced a differentiation between the four groups was whether or not the RN student had the role of a wife/husband. When the mean scores of the role strain

Table 46

Means and Standard Deviations on State Anxiety Scale Variable by Group, Point in Time, and Time of Class of RN Student

Role Strain Variable	Group 1(n=34) Mean	(n=)	S D	Group 2(n=31) Mean	(n=)	S D
STAI Form X-1						
T(1)						
Day	45.75	(16)	11.96	41.75	(4)	17.21
Evening	43.00	(18)	13.32	42.37	(27)	12.04
T(2)						
Day	47.19	(16)	11.17	32.75	(4)	8.81
Evening	42.00	(18)	14.35	40.48	(27)	12.74
T(3)						
Day	49.00	(16)	13.27	29.00	(4)	5.10
Evening	41.33	(18)	9.58	44.56	(27)	15.12
T(4)						
Day	40.63	(16)	10.10	24.75	(4)	5.50
Evening	35.67	(18)	12.26	37.56	(27)	11.13

All values are rounded to two decimal places
Group 1 RN students taking nursing courses
Group 2 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

variables across time, of the four groups, by whether or not the RN student had the role of a wife/husband in each group, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was a significant difference between the four groups on at least one of the role strain variables (see Table 47). The values and the approximate Fs of the test statistics Pillai-Bartlett trace

and Wilk's lambda were both significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. The percentage of variance in the three scales that could be attributed to group membership was 10.4%. The dimension reduction analysis revealed that only the first eigenvalue was significantly different between the four groups, at the .05 level. In other words, the four groups differed on only the first dimension.

The univariate F tests seemed to indicate that state anxiety and depression had contributed to the significant multivariate test statistics (see Table 47). Both the anxiety scale and the depression scale showed a significant difference, at the .05 level, between the four groups with the RN students in each group classified as to whether or not the RN student had the role of a wife/husband, when the scales were analyzed individually. This finding must be viewed cautiously since both the conditions necessary for the univariate approach were not met. Bartlett's test revealed that the three scales were correlated. Also, when the means of the trait anxiety scale, classified by group, point in time, and whether or not the RN student had the role of a wife/husband, were examined, it was noted that the most frequent highest trait anxiety scale mean was attributable to only one RN student (Group 3, RN students

Table 47

Values for Group Effect for Role Strain Variables with Role of Wife/Husband

	Number of Groups
	Four (N=65)
Multivariate Tests of Significance	
Pillais	
Value	.313
Approx F	2.213
Sig of F	.023
Wilks	
Value	.708
Approx F	2.272
Sig of F	.021
Eigenvalue	
Root No. 1	.279
Root No. 2	.105
Root No. 3	.000
Cannonical Corr	
Root No. 1	.467
Root No. 2	.308
Root No. 3	.019
Dimension Reduction Analysis	
Wilks lambda	
Roots	1 to 3
Value	.708
F Value	2.272
Sig of F	.021
Roots	2 to 3
Value	.905
F Value	1.433
Sig of F	.228
Roots	3 to 3
Value	1.000
F Value	.021
Sig of F	.886

Table 47 (continued)

Values for Group Effect for Role Strain Variables with Role of Wife/Husband

	Number of Groups
	Four (N=65)
Univariate F tests	
With D. F.	(3,57)
Anxiety	
Hypothesis SS	3169.742
Error SS	18294.146
F value	3.292
Sig of F	.027
Hostility	
Hypothesis SS	2737.339
Error SS	20480.193
F value	2.540
Sig of F	.065
Depression	
Hypothesis SS	2281.490
Error SS	9860.731
F value	4.396
Sig of F	.008
Multivariate Test for Homogeneity of Dispersion Matrices	
Boxs M	
F value	1.386
Approx p	.015
Statistics for Within Cells Corr	
Bartlett test	
Sig	.000
F(max) criterion	2.077
With D. F.	(3,57)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

taking their fourth nursing course, not a wife/husband, T(1), T(2), T(3), T(4)) and the most frequent lowest trait anxiety scale mean was attributable to only two RN students (Group 2, RN students taking their second or third nursing course, not a wife/husband, T(1), T(2), T(3)) (see Table 48). When the means of the depression scale, classified by group, point in time, and whether or not the RN student had the role of a wife/husband, were examined, it was noted that these same classification cells accounted for the highest and lowest means (see Table 49).

When the demographic variables were considered, the only one that made a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the role strain variables, was the time of day the RN student took the class. State anxiety seemed to be the role strain variable that contributed to this difference between the two groups. RN students taking day nursing classes appeared to evidence the most state anxiety. None of the demographic variables, when considered, made a significant difference between the RN students taking their first nursing theory course, first nursing clinical course, and the RN students taking non-nursing courses, on the role strain variables. The only demographic variables, when considered, that made a significant difference between the RN students taking their first, second or third, and fourth

Table 48

Means and Standard Deviations on the State Anxiety Scale by Group, Point in Time, and Role of Wife/Husband

Role Strain Variable	Group 1(n=18) Mean	(n=)	S D	Group 2(n=9) Mean	(n=)	S D
STAI Form X-1						
T(1)						
Wife/Husband						
No	50.14	(7)	11.89	31.00	(2)	14.14
Yes	43.64	(11)	11.87	46.14	(7)	10.37
T(2)						
Wife/Husband						
No	43.43	(7)	16.40	30.00	(2)	11.31
Yes	42.82	(11)	11.02	47.43	(7)	8.16
T(3)						
Wife/Husband						
No	42.43	(7)	12.12	29.50	(2)	12.02
Yes	43.82	(11)	7.03	54.29	(7)	10.67
T(4)						
Wife/Husband						
No	45.00	(7)	13.44	35.00	(2)	21.21
Yes	37.64	(11)	11.31	30.29	(7)	5.77

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

Table 48 (continued)

Means and Standard Deviations on the State Anxiety Scale by Group, Point in Time, and Role of Wife/Husband

Role Strain Variable	Group 3(n=7) Mean	(n=)	S D	Group 4(n=31) Mean	(n=)	S D
STAI Form X-1						
T(1)						
Wife/Husband						
No	74.00	(1)	.00	47.19	(16)	12.83
Yes	36.00	(6)	6.48	37.07	(15)	9.99
T(2)						
Wife/Husband						
No	80.00	(1)	.00	44.94	(16)	13.55
Yes	44.00	(6)	9.63	33.67	(15)	8.11
T(3)						
Wife/Husband						
No	72.00	(1)	.00	48.06	(16)	17.04
Yes	39.67	(6)	9.50	36.67	(15)	10.37
T(4)						
Wife/Husband						
No	50.00	(1)	.00	39.44	(16)	12.69
Yes	38.50	(6)	8.46	32.13	(15)	8.68

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

Table 49

Means and Standard Deviations on the Depression Scale by Group, Point in Time, and Role of Wife/Husband

Role Strain Variable	Group 1(n=18) Mean	(n=)	S D	Group 2(n=9) Mean	(n=)	S D
Short Multi-Score Depression Inventory						
T(1)						
Wife/Husband						
No	8.57	(7)	6.63	6.00	(2)	8.49
Yes	7.55	(11)	7.66	7.86	(7)	6.28
T(2)						
Wife/Husband						
No	10.71	(7)	9.96	4.00	(2)	4.24
Yes	5.18	(11)	5.46	7.71	(7)	4.42
T(3)						
Wife/Husband						
No	10.00	(7)	8.50	7.00	(2)	9.90
Yes	8.09	(11)	9.50	14.29	(7)	9.55
T(4)						
Wife/Husband						
No	11.86	(7)	8.69	6.50	(2)	9.19
Yes	5.91	(11)	6.19	1.71	(7)	1.25

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

Table 49 (continued)

Means and Standard Deviations on the Depression Scale by Group, Point in Time, and Role of Wife/Husband

Role Strain Variable	Group 3(n=7) Mean	(n=)	S D	Group 4(n=31) Mean	(n=)	S D
Short Multi-Score Depression Inventory						
T(1)						
Wife/Husband						
No	34.00	(1)	.00	12.25	(16)	7.40
Yes	7.33	(6)	8.26	6.67	(15)	5.14
T(2)						
Wife/Husband						
No	35.00	(1)	.00	10.88	(16)	8.24
Yes	8.50	(6)	7.56	5.67	(15)	3.75
T(3)						
Wife/Husband						
No	29.00	(1)	.00	15.94	(16)	12.10
Yes	9.17	(6)	8.86	7.33	(15)	8.31
T(4)						
Wife/Husband						
No	40.00	(1)	.00	12.50	(16)	9.97
Yes	10.67	(6)	8.04	4.53	(15)	4.94

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

nursing course and those taking non-nursing courses, on the role strain variables, was whether or not the RN student had the role of wife/husband. State anxiety and depression seemed to be the role strain variables that contributed to this difference between the four groups. But, on further examination of the means of the classification cells of these variables it was noted that the most frequent highest and lowest means were attributable to only three RN students.

Further analysis of the demographic variables is beyond the scope of this study.

Nursing Role Perspective Variables

10. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses? Nursing role perspective was assumed to be evidenced by the scores on four scales (Nursing Orientation Toward Care or Cure Scale, Bureaucratic, Service, and Professional scales of Opinions About Nursing). These measures of nursing role perspective were taken at four points in time during the academic term. All RN students taking nursing courses were considered as one group and all RN students taking non-nursing courses

were considered as one group. The four scales measuring nursing role perspective were analyzed simultaneously by the doubly multivariate repeated measures analysis of variance procedure.

Figures 10, 11, 12, and 13 plot the means, across the four points in time, of the indicators of nursing role perspective, for the two groups of RN students. The means and standard deviations for each of these scales, over the four points in time, for the two groups can be found in Appendix H, IV. The RN students taking non-nursing courses consistently had higher mean scores on the care/cure and bureaucratic scales, but the RN students taking nursing courses consistently had higher mean scores on the

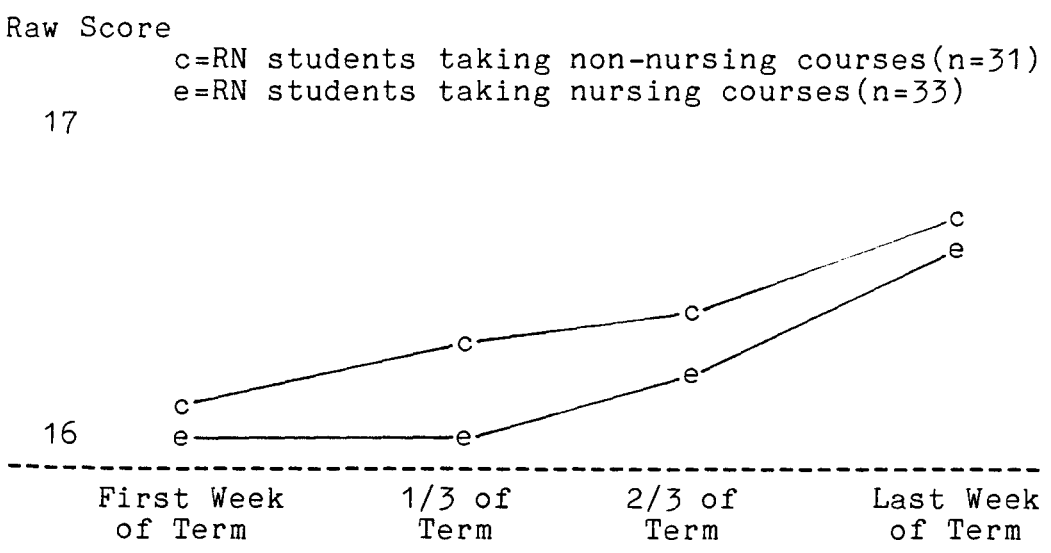

Figure 10. Mean score on Care/Cure scale at each of four points in time during the academic term for the two groups of RN students

professional scale. On the service scale, the RN students taking nursing courses also had higher mean scores than those taking non-nursing courses, except for time point one, when they had a lower mean score.

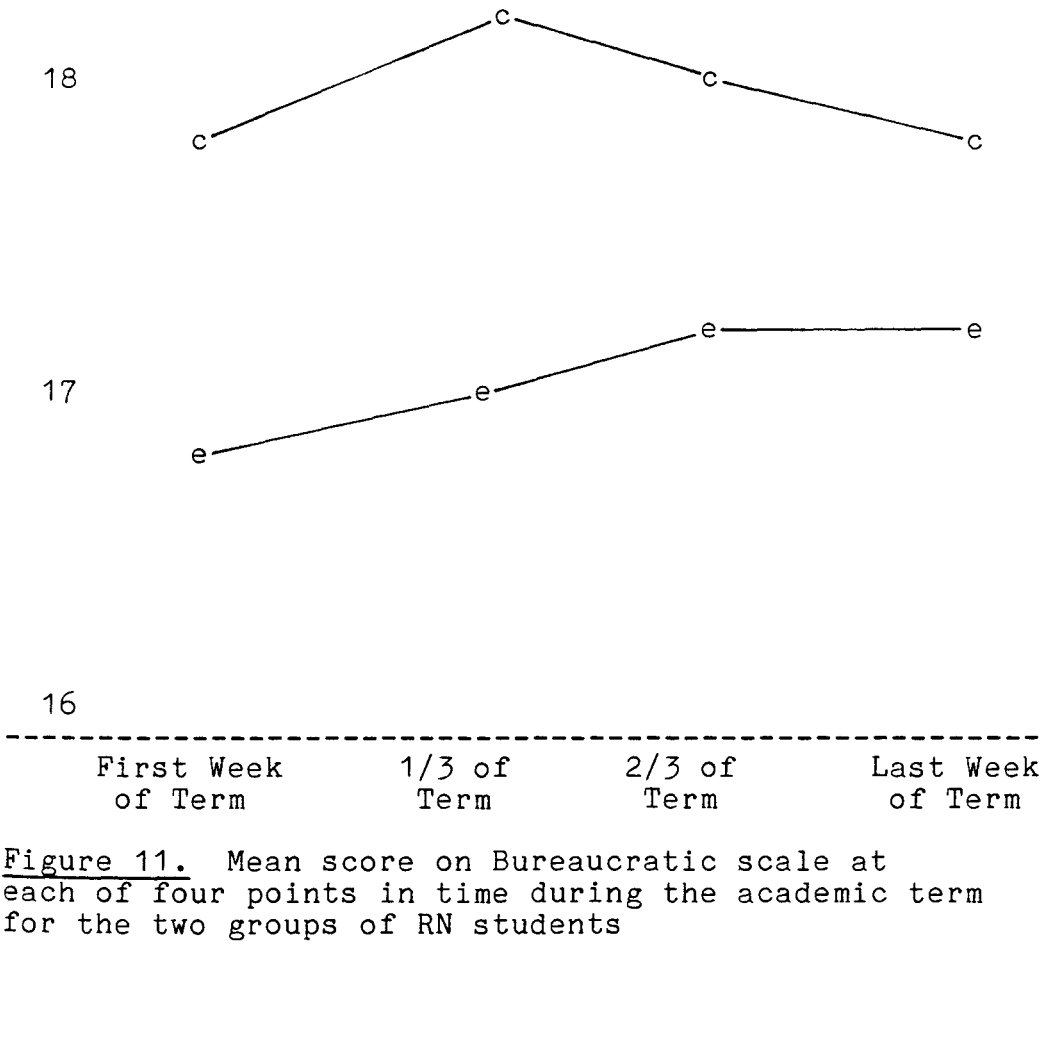

Figure 11. Mean score on Bureaucratic scale at each of four points in time during the academic term for the two groups of RN students

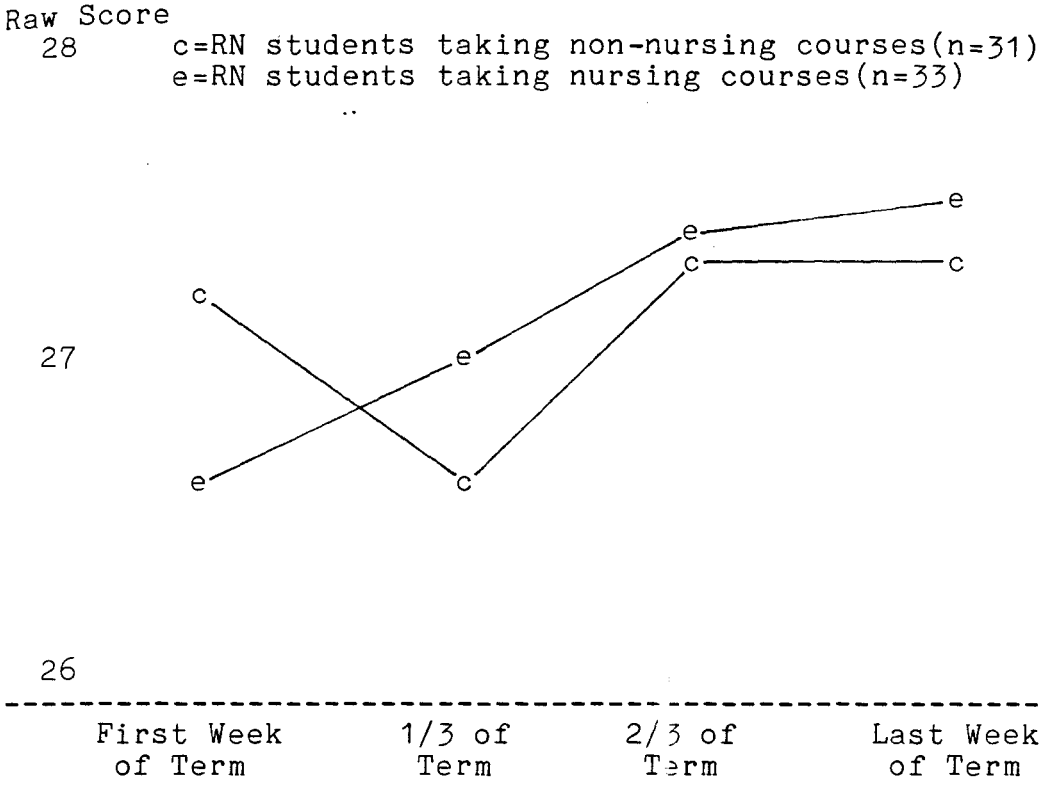

Figure 12. Mean score on Service scale at each of four points in time during the academic term for the two groups of RN students

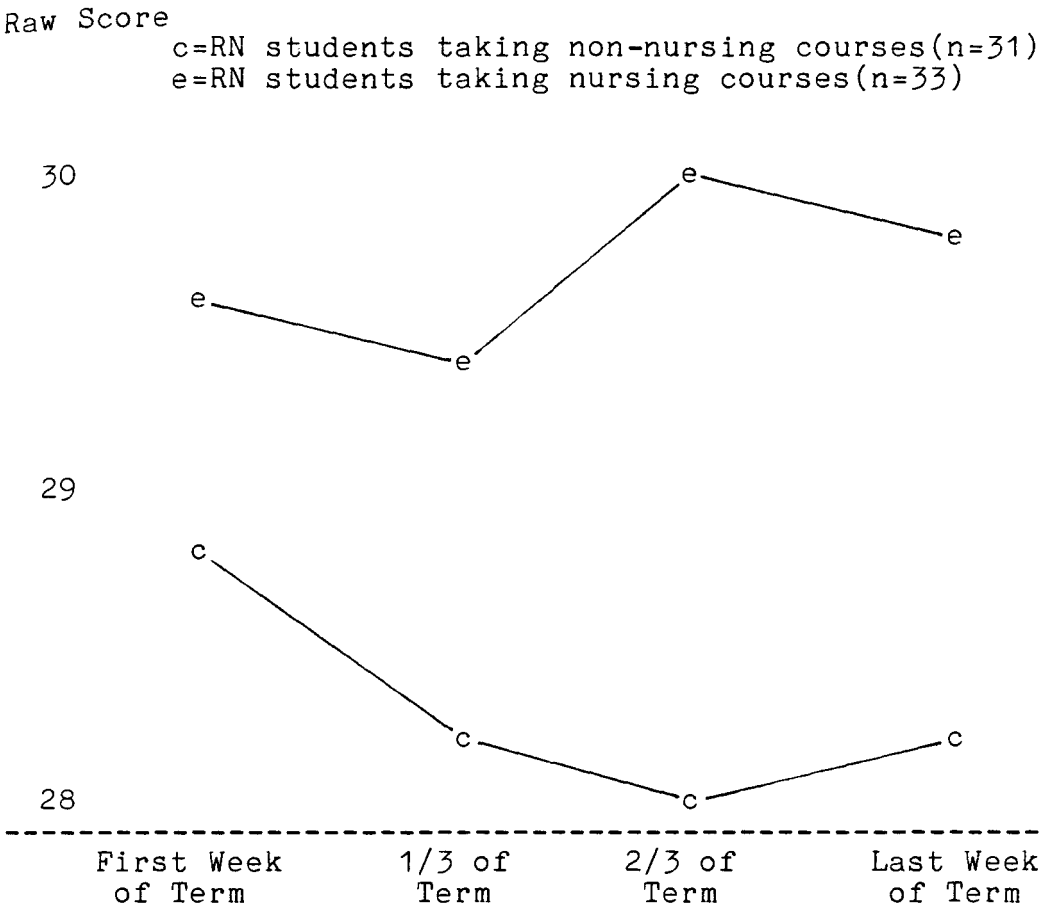

Figure 13. Mean score on Professional scale at each of four points in time during the academic term for the two groups of RN students

When the mean scores across time, of the two groups, on the nursing role perspective variables were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 50). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non - significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 10.6% of the variance in the four scales could be attributed to group membership. Or, looking at the analysis from a different perspective, 89.4% of the total variability was not explained by group differences. Also, the eigenvalue was very small, indicating very small group differences on the one variate. As expected, the dimension reduction analysis revealed that the eigenvalue was not significantly different from 0, at the .05 level.

Even though the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made, they also revealed that there was no significant difference, at the .05 level, between the two groups of RN students on any of the four scales when the four scales were analyzed individually. This was to be expected since the multivariate statistics were not

Table 50

Values for Group Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.106	.157	.140
Approx F	1.742	1.253	.720
Sig of F	.153	.275	.731
Wilks			
Value	.894	.848	.861
Approx F	1.742	1.244	.732
Sig of F	.153	.280	.719
Eigenvalue			
Root No. 1	.118	.129	.154
Root No. 2		.044	.005
Root No. 3			.001
Cannonical Corr			
Root No. 1	.325	.338	.366
Root No. 2		.205	.072
Root No. 3			.026
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.894	.848	.861
F Value	1.742	1.244	.732
Sig of F	.153	.280	.719
Roots		2 to 2	2 to 3
Value		.958	.994
F Value		.865	.057
Sig of F		.464	.999
Roots			3 to 3
Value			.999
F Value			.020
Sig of F			.980

N=One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 50 (continued)

Values for Group Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(1,62)	(1,62)	(1,62)
Care/Cure			
Hypothesis SS	2.131	50.633	2.296
Error SS	1394.647	1346.144	1394.481
F value	.095	1.147	.033
Sig of F	.759	.324	.992
Bureaucratic			
Hypothesis SS	49.679	62.236	68.821
Error SS	1372.254	1359.697	1353.113
F value	2.245	1.396	1.017
Sig of F	.139	.255	.391
Service			
Hypothesis SS	.037	9.225	6.601
Error SS	1554.448	1545.259	1547.884
F value	.001	.182	.085
Sig of F	.970	.834	.968
Professional			
Hypothesis SS	126.686	133.496	157.920
Error SS	2613.314	2606.504	2582.080
F value	3.006	1.562	1.223
Sig of F	.088	.218	.309

Table 50 (continued)

Values for Group Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.151	.160	.146
F(max) criterion	1.904	1.936	1.908
With D. F.	(4,62)	(4,61)	(4,60)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

significant. The four nursing role perspective scales were not found to be correlated, as revealed by the Bartlett test. Bartlett's test confirmed that the correlation matrix of the nursing role perspective variables was not significantly different, at the .05 level, from an identity matrix (indicates independent variables). Therefore, the two conditions for the univariate approach had been met.

With the RN students divided into the three previously described groups, Figures 14, 15, 16, and 17 plot the means, of the nursing role perspective scales, across the four points in time, for the three groups. The means and standard deviations for each of these scales, over the four points in time, for the three groups can be found in Appendix H, V. With the RN students taking nursing courses separated into two groups, one noted that only on the Service scale did their patterns of mean scores across time appear similar (see Figure 16). There was no predominant pattern of the mean scores across time on the four variables for the three groups. None of the three groups had a similar pattern across time on the care/cure, Bureaucratic, or Professional scale (see Figures 14, 15, and 17). As noted above, on the Service scale, the RN students taking their first nursing theory course and those taking their first nursing clinical course had a similar pattern across time. Those RN students taking their first nursing theory course

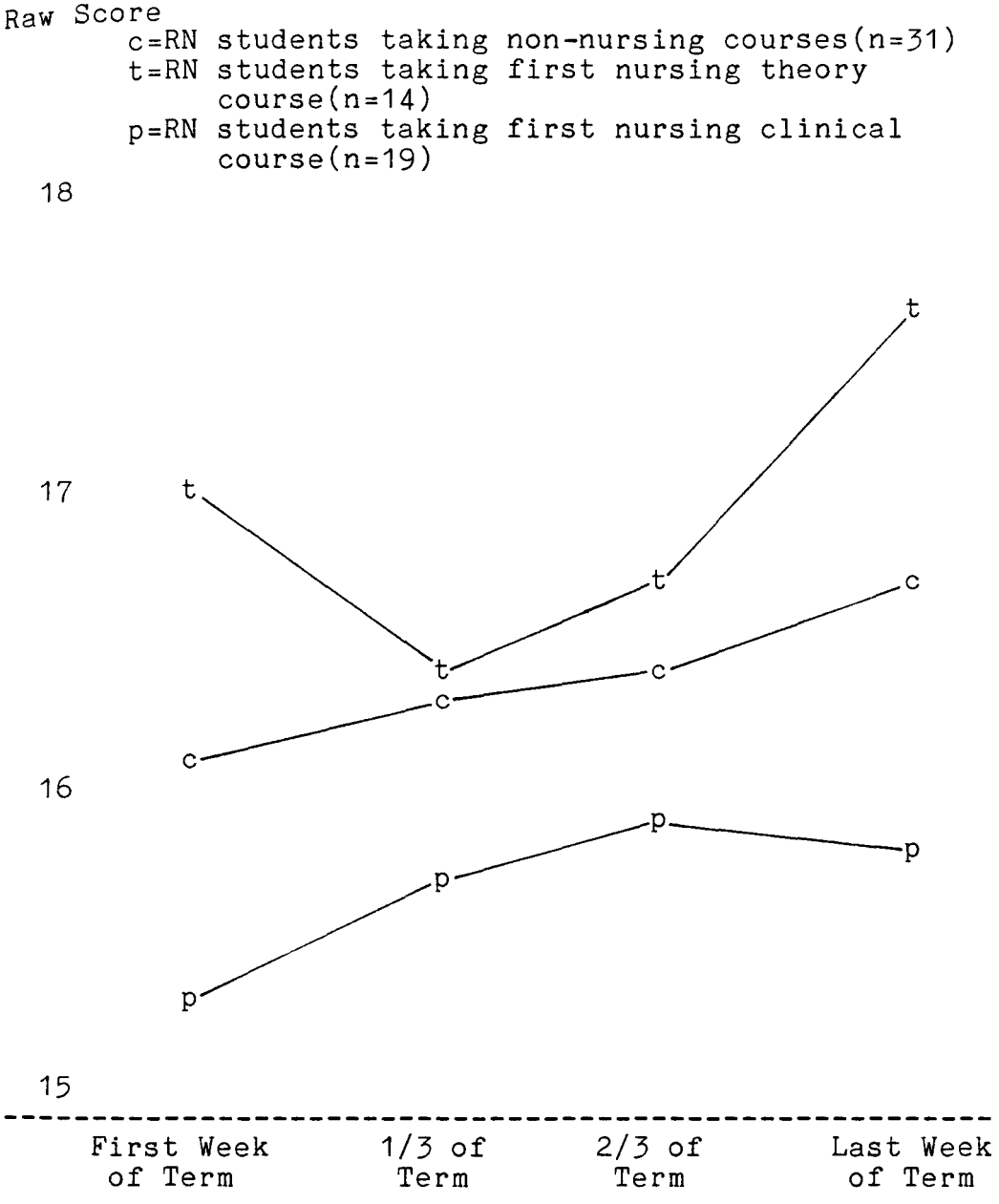

Figure 14. Mean score on Care/Cure scale at each of four points in time during the academic term for the three groups of RN students

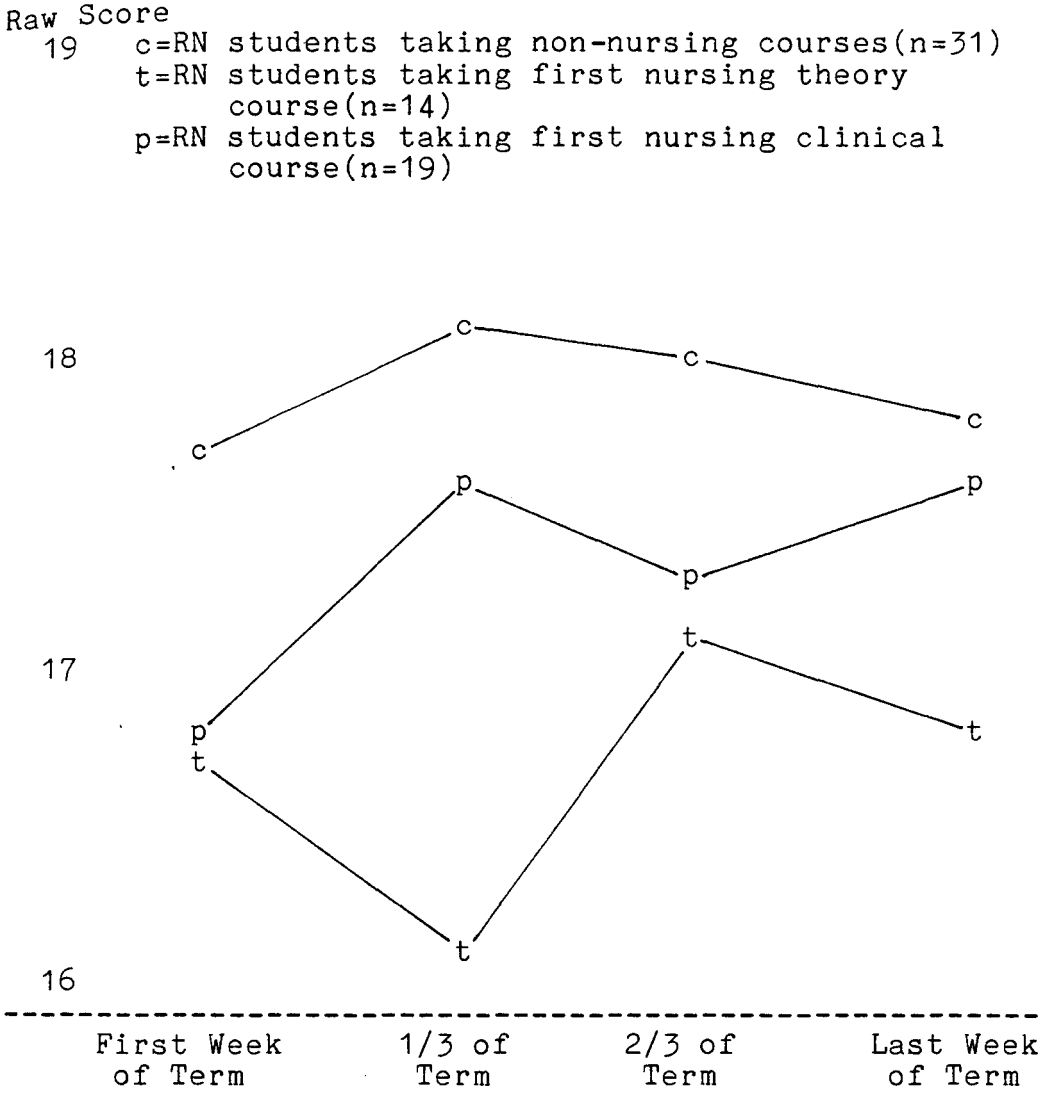

Figure 15. Mean score on Bureaucratic scale at each of four points in time during the academic term for the three groups of RN students

Raw Score

c=RN students taking non-nursing courses(n=31)
t=RN students taking first nursing theory course(n=14)
p=RN students taking first nursing clinical course(n=19)

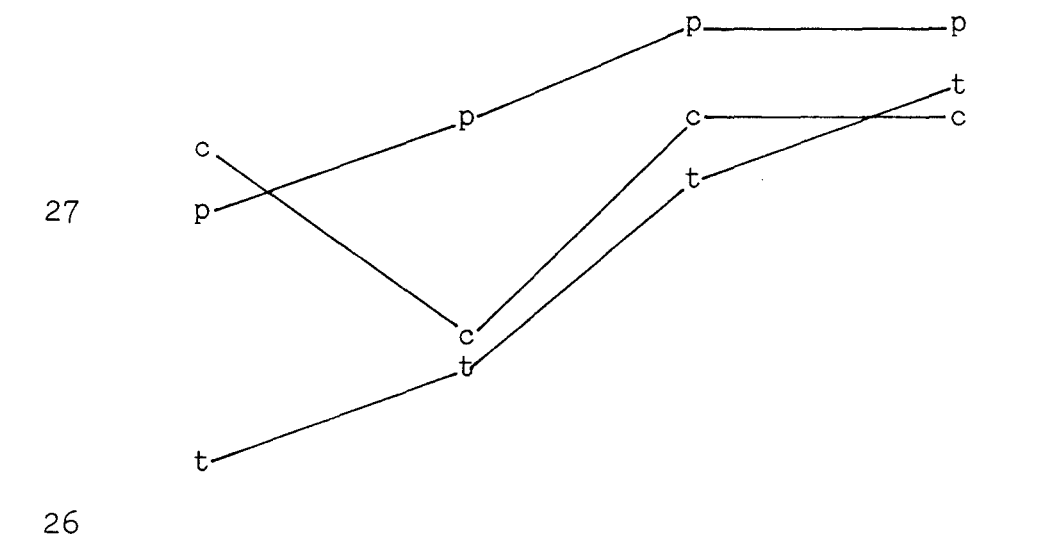

Figure 16. Mean score on Service scale at each of four points in time during the academic term for the three groups of RN students

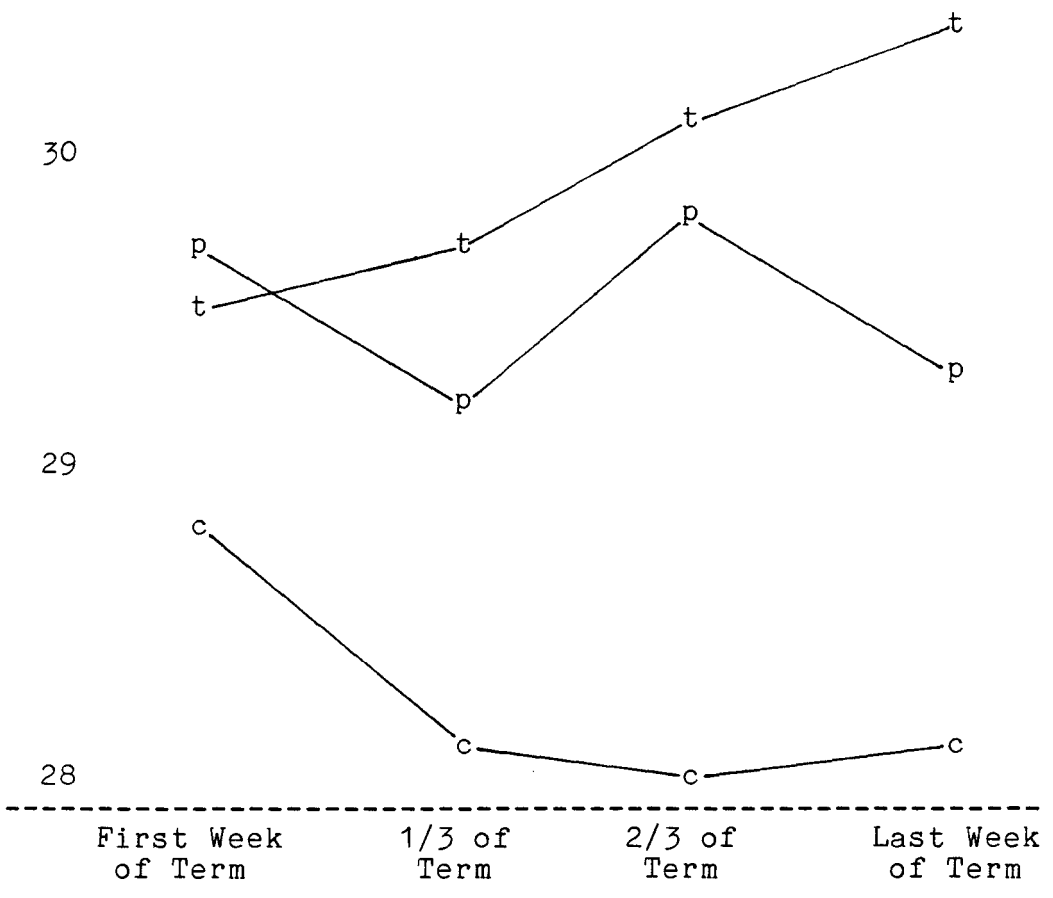

Figure 17. Mean score on Professional scale at each of four points in time during the academic term for the three groups of RN students

had a similar pattern across time only on the Service and Professional scales (see Figures 16 and 17). Those taking their first nursing clinical course had a similar pattern across time only on the care/cure and Service scales (see Figures 14 and 16). Those RN students taking non-nursing courses had no similar pattern across time on any of the scales (see Figures 14 through 17).

When the mean scores across time, of the three groups, on the nursing role perspective variables were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the three groups on any of the variables (see Table 50). The values and the approximate Fs of the test statistics Pillai - Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 7.9% of the variance in the four scales could be attributed to group membership. Also, the eigenvalues were very small, indicating very small group differences on the two variates. As expected, the dimension reduction analysis revealed that the eigenvalues were not significantly different from 0, at the .05 level.

Even though the significance levels for the univariate statistics are not adjusted for the fact that several

comparisons are being made, they also revealed that there was no significant difference, at the .05 level, between the three groups of RN students on any of the four scales when the four scales were analyzed individually. This was to be expected since the multivariate statistics were not significant. The four nursing role perspective scales were not found to be correlated, as revealed by the Bartlett test. Bartlett's test confirmed that the correlation matrix of the nursing role perspective variables was not significantly different, at the .05 level, from an identity matrix (indicates independent variables). Therefore, the two conditions for the univariate approach had been met.

The means across the four points in time, of the nursing role perspective scales, for the previously described four groups of RN students are displayed in Figures 18, 19, 20, and 21. The means and standard deviations for each of these scales, over the four points in time, for the four groups can be found in Appendix H, VI. With the RN students taking nursing courses divided into the three groups based on the number of previous nursing courses they had completed, one noted that on none of the scales did their patterns of mean scores across time appear similar. Those RN students taking their second or third nursing course appeared to have a similar pattern across time on the Bureaucratic and Service scales (see Figures 19 and 20).

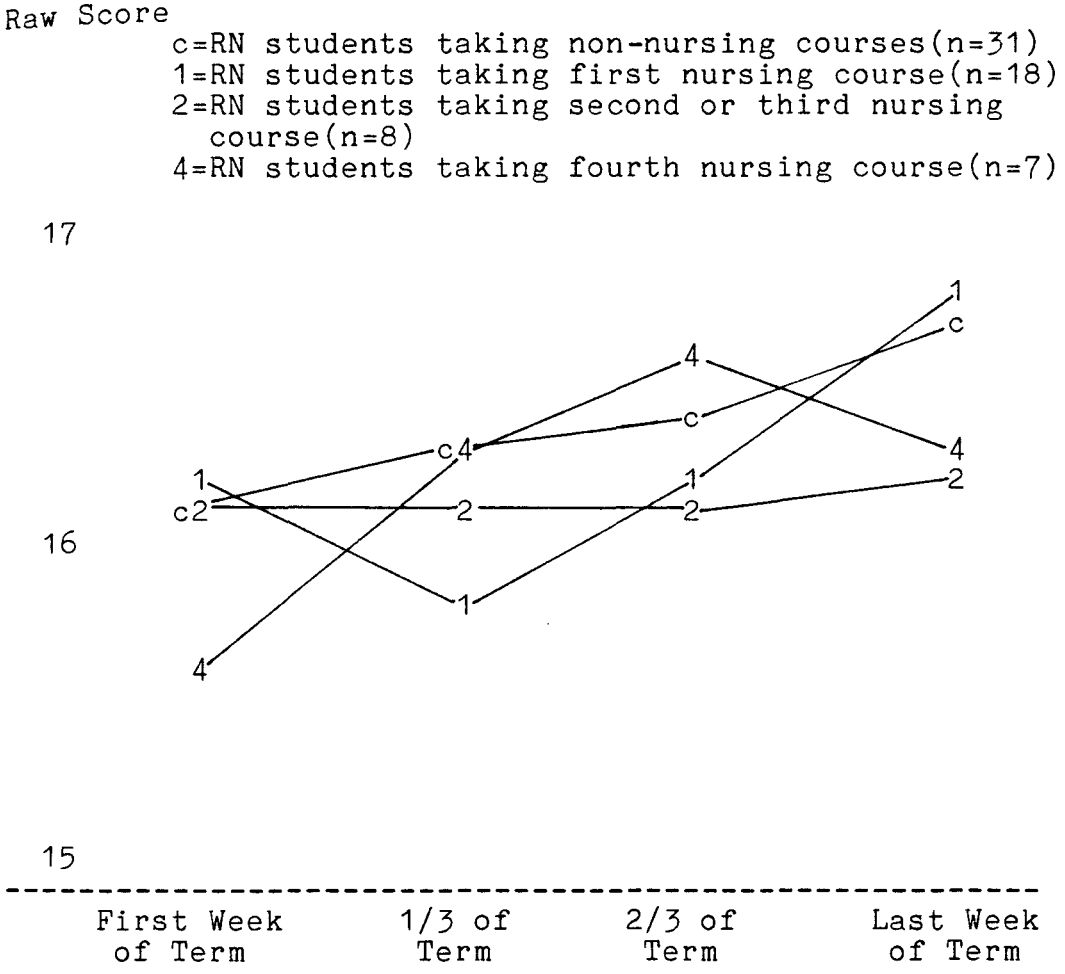

Figure 18. Mean score on Care/Cure Scale at each of four points in time during the academic term for the four groups of RN students

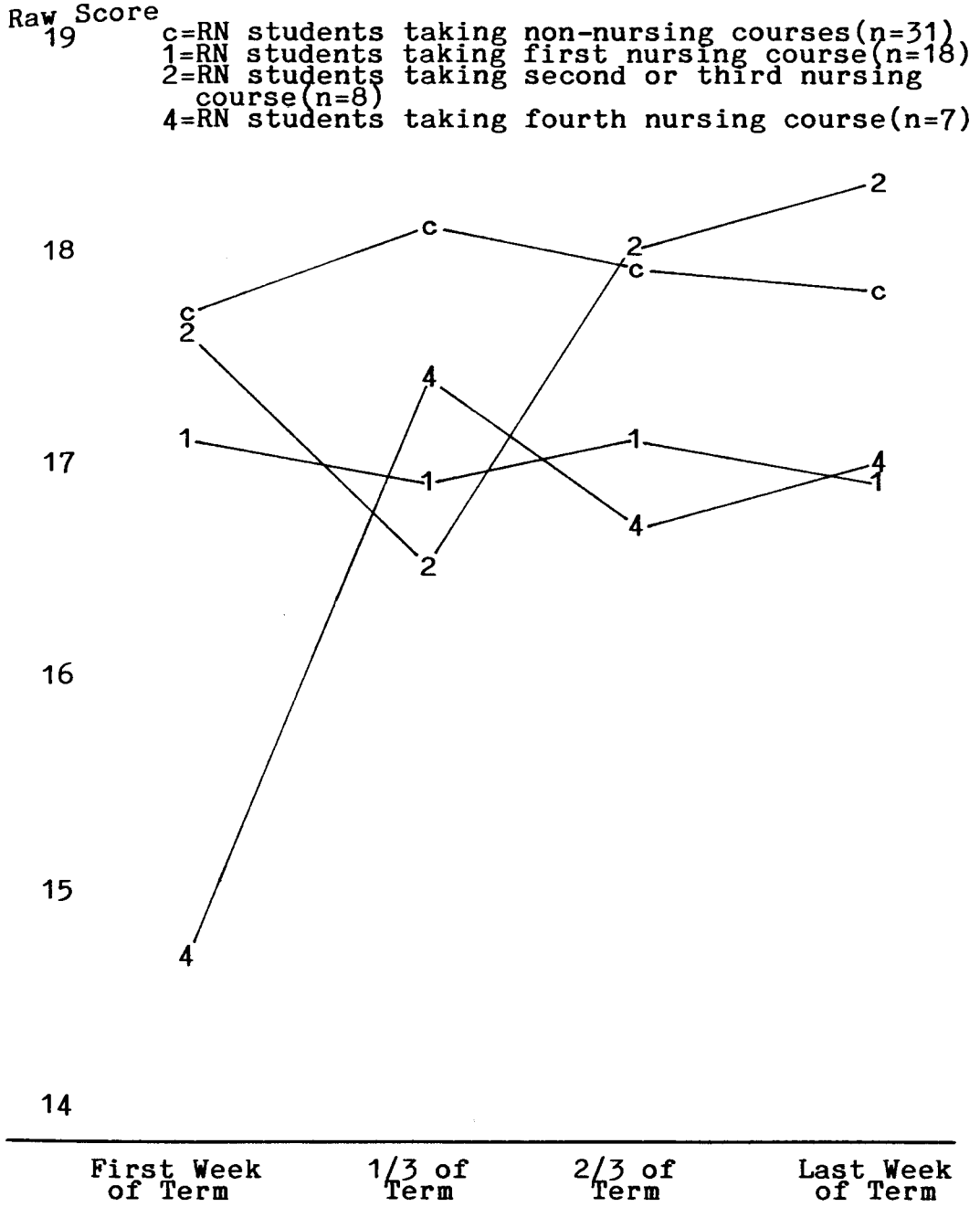

Figure 19. Mean score on Bureaucratic Scale at each of four points in time during the academic term for the four groups of RN students

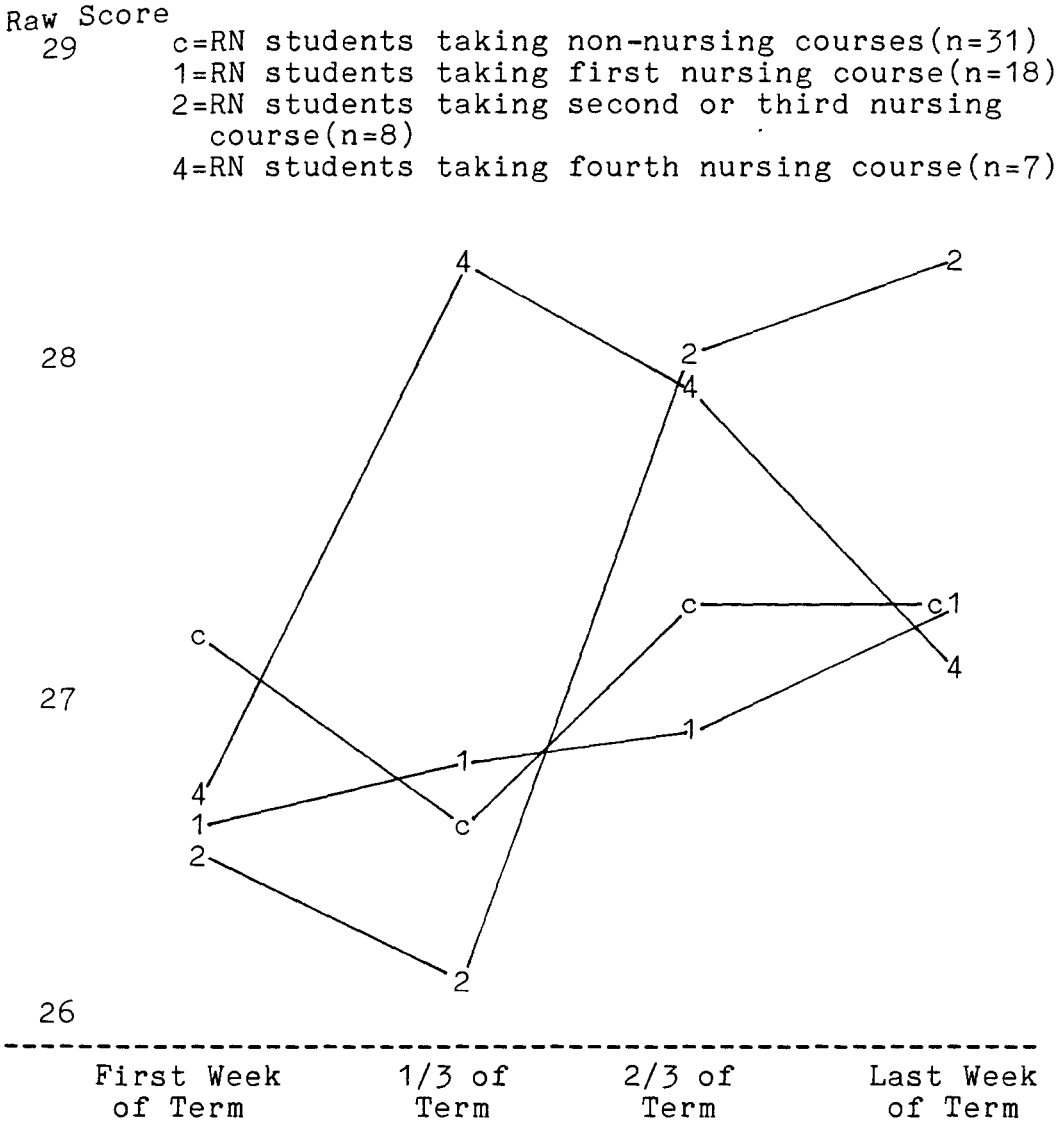

Figure 20. Mean score on Service Scale at each of four points in time during the academic term for the four groups of RN students

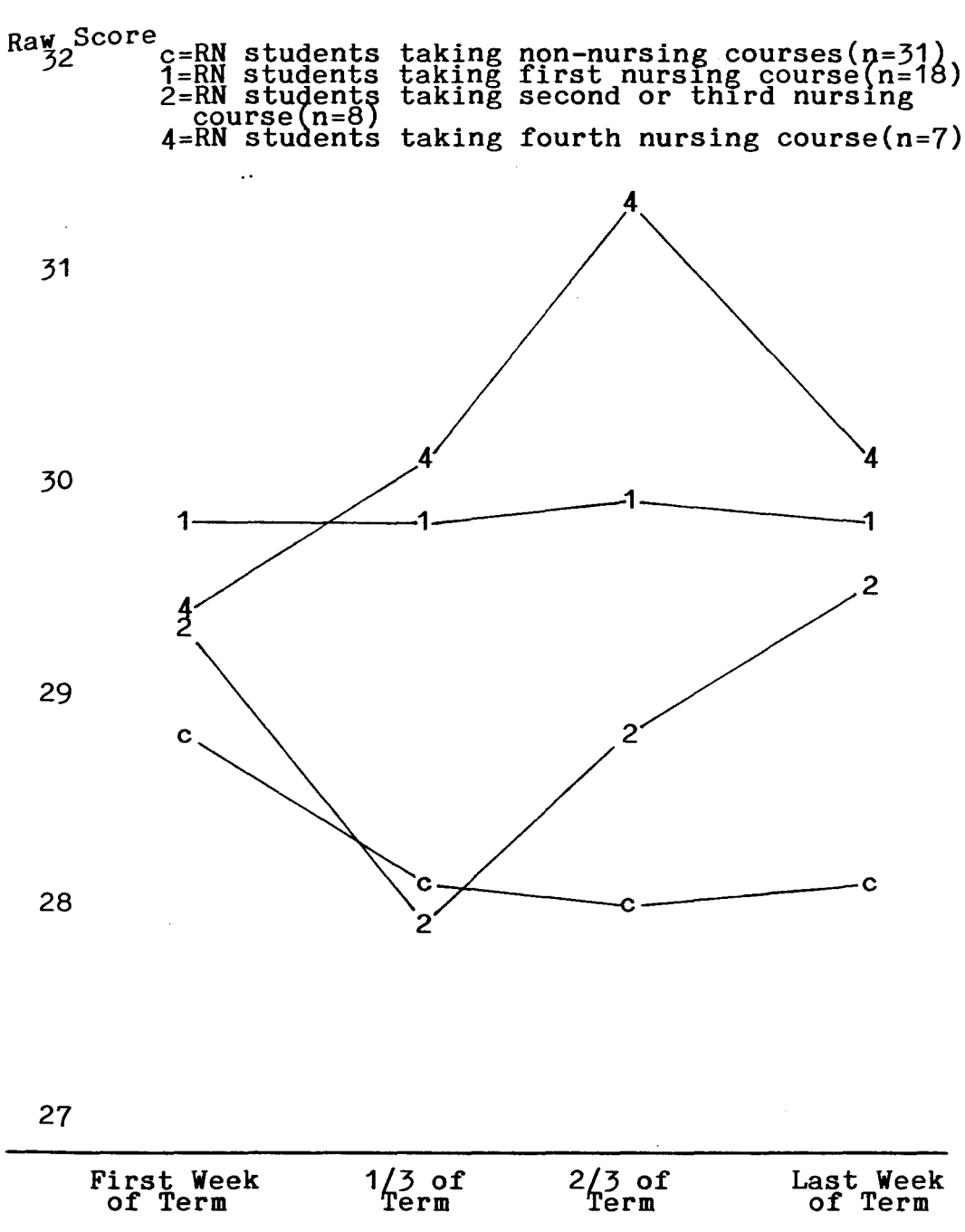

Figure 21. Mean score on Professional Scale at each of four points in time during the academic term for the four groups of RN students

Also, there was a somewhat similar pattern for those taking their fourth nursing course on the care/cure and Professional scales (see Figures 18 and 21). But, those taking their first nursing course or taking non-nursing courses appeared to have no similar patterns on any of the scales. On the care/cure scale those RN students taking their second or third nursing course and those taking non-nursing courses had a somewhat similar pattern across time (see Figure 18). And, on the Service scale, these same two groups had a similar pattern (see Figure 20). But, on the Bureaucratic and Professional scales, none of the groups had similar patterns of means across time (see Figures 19 and 21).

When the mean scores across time, of the four groups, on the nursing role perspective variables were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four groups on any of the variables (see Table 50). The values and the approximate Fs of the test statistics Pillai - Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had been violated. Only 4.7% of the variance in the four scales could be attributed to group membership. Also, the eigenvalues were very small, indicating very small group differences on the

three variates. As expected, the dimension reduction analysis revealed that the eigenvalues were not significantly different from 0, at the .05 level.

Even though the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made, they also revealed that there was no significant difference, at the .05 level, between the four groups of RN students on any of the four scales when the four scales were analyzed individually. This was to be expected since the multivariate statistics were not significant. The four nursing role perspective scales were not found to be correlated, as revealed by the Bartlett test. Bartlett's test confirmed that the correlation matrix of the nursing role perspective variables was not significantly different, at the .05 level, from an identity matrix (indicates independent variables). But, the two conditions for the univariate approach had been met since the assumption of homogeneity - of - dispersion - matrices had been violated.

No significant differences were found between the groups, with any of the three groupings of RN students, on the mean scores, across time, of the nursing role perspective variables.

11. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective at each of four time points during a term than those taking non-nursing courses? When the mean scores at time point one, the first week of the term, of the two groups on the nursing role perspective variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 51). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 6.4% of the variance in the four scales at time point one could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point one on any of the four scales when the four scales were analyzed individually (see Table 51). Bartlett's test confirmed that the nursing role perspective variables were independent (uncorrelated) variables.

Table 51

Values for Group Effect for Nursing Role Perspective Variables at Time Point One

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.064	.124	.133
Approx F	1.010	.979	.684
Sig of F	.409	.456	.765
Wilks			
Value	.936	.879	.870
Approx F	1.010	.962	.682
Sig of F	.409	.469	.767
Eigenvalue			
Root No. 1	.069	.071	.122
Root No. 2		.061	.024
Root No. 3			.001
Cannonical Corr			
Root No. 1	.253	.258	.329
Root No. 2		.241	.153
Root No. 3			.033
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.936	.879	.870
F Value	1.010	.962	.682
Sig of F	.409	.469	.767
Roots		2 to 2	2 to 3
Value		.942	.975
F Value		1.207	.242
Sig of F		.315	.962
Roots			3 to 3
Value			.999
F Value			.032
Sig of F			.969

N= One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 51 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point One

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(1,62)	(2,61)	(3,60)
Care/Cure			
Hypothesis SS	.071	22.935	1.951
Error SS	421.679	398.815	419.799
F value	.010	1.754	.093
Sig of F	.919	.182	.964
Bureaucratic			
Hypothesis SS	16.457	16.461	53.921
Error SS	586.481	586.477	549.017
F value	1.740	.856	1.964
Sig of F	.192	.430	.129
Service			
Hypothesis SS	4.962	9.294	5.170
Error SS	560.475	556.143	560.267
F value	.549	.510	.185
Sig of F	.462	.603	.906
Professional			
Hypothesis SS	9.412	9.686	10.590
Error SS	802.072	801.799	800.894
F value	.728	.368	.264
Sig of F	.397	.693	.851

Table 51 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point One

Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.132	.144	.145
F(max) criterion	1.902	2.010	1.908
With D. F.	(4,62)	(4,61)	(4,60)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

When the RN students were divided into the three and four groups, as previously described, and the preceding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the nursing role perspective variables at time point one, when the nursing role perspective variables were analyzed simultaneously (see Table 51). The values and the

approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated for the three groups but had been violated for the four groups of RN students. Only 6.2% of the variance in the four scales at time point one could be attributed to group membership with the RN students divided into three groups and only 4.4% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point one on any of the four scales when the four scales were analyzed individually (see Table 51). Bartlett's test confirmed that the nursing role perspective variables were independent in both the three and four groupings of RN students.

When the mean scores at time point two, one-third of the way through the term, of the two groups on the nursing role perspective variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 52). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 10.7% of the variance in the four scales at time point two could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point two on any of the four scales when the four scales were analyzed individually (see Table 52). Bartlett's test confirmed that the nursing role perspective variables were independent (uncorrelated) variables.

Table 52

Values for Group Effect for Nursing Role Perspective Variables at Time Point Two

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.107	.161	.165
Approx F	1.761	1.288	.860
Sig of F	.149	.256	.588
Wilks			
Value	.893	.843	.841
Approx F	1.761	1.293	.854
Sig of F	.149	.254	.595
Eigenvalue			
Root No. 1	.119	.156	.133
Root No. 2		.027	.041
Root No. 3			.008
Cannonical Corr			
Root No. 1	.327	.367	.343
Root No. 2		.161	.199
Root No. 3			.091
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.893	.843	.841
F Value	1.761	1.293	.854
Sig of F	.149	.254	.595
Roots		2 to 2	2 to 3
Value		.974	.952
F Value		.525	.478
Sig of F		.667	.824
Roots			3 to 3
Value			.992
F Value			.244
Sig of F			.784

N= One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 52 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Two

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(1,62)	(2,61)	(3,60)
Care/Cure			
Hypothesis SS	1.347	4.449	2.544
Error SS	358.387	355.286	357.191
F value	.233	.382	.142
Sig of F	.631	.684	.934
Bureaucratic			
Hypothesis SS	22.622	40.940	25.842
Error SS	513.363	495.044	510.143
F value	2.732	2.522	1.013
Sig of F	.103	.089	.393
Service			
Hypothesis SS	2.419	6.276	20.586
Error SS	590.518	586.661	572.352
F value	.254	.326	.719
Sig of F	.616	.723	.544
Professional			
Hypothesis SS	25.575	28.070	50.610
Error SS	875.363	872.867	850.327
F value	1.811	.981	1.190
Sig of F	.183	.381	.321

Table 52 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Two

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.121	.119	.161
F(max) criterion	2.443	2.457	2.381
With D. F.	(4,62)	(4,61)	(4,60)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

When the RN students were divided into the three and four groups, as previously described, and the preceding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the nursing

role perspective variables at time point two, when the nursing role perspective variables were analyzed simultaneously (see Table 52). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated for the three groups but had been violated for the four groups of RN students. Only 8.1% of the variance in the four scales at time point two could be attributed to group membership with the RN students divided into three groups and only 5.5% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point two on any of the four scales when the four scales were analyzed individually (see Table 52). Bartlett's test confirmed that

the nursing role perspective variables were independent in both the three and four groupings of RN students.

When the mean scores at time point three, two-thirds of the way through the term, of the two groups on the nursing role perspective variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 53). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 8.5% of the variance in the four scales at time point three could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0 at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point three on any of the four scales when the four scales were analyzed individually (see Table 53). It was noted that the Professional scale did approach the .05 level of significance. It was significant

Table 53

Values for Group Effect for Nursing Role Perspective Variables at Time Point Three

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.085	.106	.153
Approx F	1.374	.826	.792
Sig of F	.254	.581	.658
Wilks			
Value	.915	.896	.850
Approx F	1.374	.822	.797
Sig of F	.254	.585	.653
Eigenvalue			
Root No. 1	.093	.094	.149
Root No. 2		.020	.020
Root No. 3			.004
Cannonical Corr			
Root No. 1	.292	.294	.360
Root No. 2		.141	.141
Root No. 3			.061
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.915	.896	.850
F Value	1.374	.822	.797
Sig of F	.254	.585	.653
Roots		2 to 2	2 to 3
Value		.980	.977
F Value		.396	.231
Sig of F		.756	.966
Roots			3 to 3
Value			.996
F Value			.111
Sig of F			.895

N= One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 53 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Three

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(1,62)	(2,61)	(3,60)
Care/Cure			
Hypothesis SS	.500	5.914	1.472
Error SS	395.609	390.195	394.638
F value	.078	.462	.075
Sig of F	.780	.632	.973
Bureaucratic			
Hypothesis SS	9.126	9.243	16.269
Error SS	456.483	456.366	449.341
F value	1.240	.618	.724
Sig of F	.270	.542	.542
Service			
Hypothesis SS	.081	1.614	8.159
Error SS	408.653	407.120	400.576
F value	.012	.121	.407
Sig of F	.912	.886	.748
Professional			
Hypothesis SS	60.121	61.128	84.127
Error SS	1039.879	1038.872	1015.873
F value	3.585	1.795	1.656
Sig of F	.063	.175	.186

Table 53 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Three

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.279	.277	.245
F(max) criterion	2.629	2.662	2.574
With D. F.	(4,62)	(4,61)	(4,60)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

at the .063 level. Bartlett's test confirmed that the nursing role perspective variables were independent (uncorrelated) variables.

When the RN students were divided into the three and four groups, as previously described, and the preceding statistical procedures applied to the two groups of RN

students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the nursing role perspective variables at time point three, when the nursing role perspective variables were analyzed simultaneously (see Table 53). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated for the three groups but had been violated for the four groups of RN students. Only 5.3% of the variance in the four scales at time point three could be attributed to group membership with the RN students divided into three groups and only 5.1% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the

three or four groups of RN students at time point three on any of the four scales when the four scales were analyzed individually (see Table 53). Bartlett's test confirmed that the nursing role perspective variables were independent in both the three and four groupings of RN students.

When the mean scores at time point four, the last week of the term, of the two groups on the nursing role perspective variables were analyzed simultaneously by multivariate analysis of variance, there was no significant difference between the two groups on any of the variables (see Table 54). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated. Only 8.4% of the variance in the four scales at time point four could be attributed to group membership. The eigenvalue was very small, indicating very small group differences on the one variate. As expected, the eigenvalue was not significantly different from 0, at the .05 level, as revealed by the dimension reduction analysis.

The univariate statistics also revealed that there was no significant difference, at the .05 level, between the two groups of RN students at time point four on any of the four

Table 54

Values for Group Effect for Nursing Role Perspective Variables at Time Point Four

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.084	.165	.129
Approx F	1.356	1.330	.665
Sig of F	.260	.235	.783
Wilks			
Value	.916	.841	.873
Approx F	1.356	1.312	.661
Sig of F	.260	.244	.786
Eigenvalue			
Root No. 1	.092	.117	.115
Root No. 2		.065	.024
Root No. 3			.003
Cannonical Corr			
Root No. 1	.290	.324	.321
Root No. 2		.247	.155
Root No. 3			.051
Dimension Reduction Analysis			
Wilks lambda			
Roots	1	1 to 2	1 to 3
Value	.916	.841	.873
F Value	1.356	1.312	.661
Sig of F	.260	.244	.786
Roots		2 to 2	2 to 3
Value		.939	.974
F Value		1.273	.261
Sig of F		.292	.954
Roots			3 to 3
Value			.997
F Value			.076
Sig of F			.927

N= One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 54 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Four

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(1,62)	(1,62)	(1,62)
Care/Cure			
Hypothesis SS	.617	26.212	2.759
Error SS	404.117	378.522	401.975
F value	.095	2.112	.137
Sig of F	.759	.130	.937
Bureaucratic			
Hypothesis SS	5.120	10.888	15.221
Error SS	400.739	394.972	390.638
F value	.792	.841	.779
Sig of F	.377	.436	.510
Service			
Hypothesis SS	.593	1.200	6.478
Error SS	597.017	596.410	591.131
F value	.062	.061	.219
Sig of F	.805	.941	.883
Professional			
Hypothesis SS	43.985	53.967	45.532
Error SS	800.999	791.018	799.452
F value	3.405	2.081	1.139
Sig of F	.070	.134	.341

Table 54 (continued)

Values for Group Effect for Nursing Role Perspective Variables at Time Point Four

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.047	.061	.050
F(max) criterion	1.999	2.090	2.047
With D. F.	(4,62)	(4,61)	(4,60)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

scales when the four scales were analyzed individually (see Table 54). It was noted that the Professional scale did approach the .05 level of significance. It was significant at the .07 level. Bartlett's test confirmed that the nursing role perspective variables were dependent (correlated) variables.

When the RN students were divided into the three and four groups, as previously described, and the preceding statistical procedures applied to the two groups of RN students were applied to the three and four groupings of RN students, there was still no significant difference between the three groups or the four groups on any of the nursing role perspective variables at time point four, when the nursing role perspective variables were analyzed simultaneously (see Table 54). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level for both the three and four groupings of RN students. Box's M revealed that the assumption of homogeneity - of - dispersion - matrices had not been violated for the three groups but had been violated for the four groups of RN students. Only 8.3% of the variance in the four scales at time point four could be attributed to group membership with the RN students divided into three groups and only 4.3% with them divided into four groups. Also, the eigenvalues for both the three and four groups of RN students were very small, indicating very small group differences on the variates. As expected the dimension reduction analysis revealed that all of the eigenvalues were not significantly different from 0, at the .05 level, for both the three and four groups of RN students.

With the RN students divided into three and four groups, the univariate statistics also revealed that there was no significant difference, at the .05 level, between the three or four groups of RN students at time point four on any of the four scales when the four scales were analyzed individually (see Table 54). Bartlett's test confirmed that the nursing role perspective variables were independent in the three groups but dependent in the four groups of RN students.

There was no significant difference, at any of the four points in time, on the nursing role perspective variables, between any of the groupings of the RN students.

12. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different across four time points during the term? The analysis was first performed with all groups of RN students in the analysis. When the mean scores, of the four points in time, on the four nursing role perspective variables, across the two groups of RN students, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 55). The values and the approximate F<u></u>s of the test statistics Pillai-Bartlett trace and Wilks'

Table 55

Values for Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.100	.094	.083
Approx F	1.595	1.479	1.268
Sig of F	.089	.128	.234
Wilks			
Value	.902	.907	.918
Approx F	1.611	1.497	1.280
Sig of F	.085	.121	.227
Eigenvalue			
Root No. 1	.088	.088	.076
Root No. 2	.014	.009	.009
Root No. 3	.006	.005	.003
Cannonical Corr			
Root No. 1	.284	.284	.266
Root No. 2	.116	.096	.092
Root No. 3	.078	.068	.056
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 3	1 to 3
Value	.902	.907	.918
F Value	1.611	1.497	1.280
Sig of F	.085	.121	.227
Roots	2 to 3	2 to 3	2 to 3
Value	.981	.986	.988
F Value	.606	.424	.349
Sig of F	.726	.863	.910
Roots	3 to 3	3 to 3	3 to 3
Value	.994	.995	.997
F Value	.571	.426	.284
Sig of F	.566	.654	.753

N= One subject who completed the role strain scales did not complete the nursing role perspective scales

Table 55 (continued)

Values for Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(3,186)	(3,183)	(3,180)
Care/Cure			
Hypothesis SS	12.717	12.410	6.988
Error SS	185.146	176.674	179.121
F value	4.259	4.285	2.341
Sig of F	.006	.006	.075
Bureaucratic			
Hypothesis SS	5.177	5.537	13.717
Error SS	584.811	573.162	546.025
F value	.549	.589	1.507
Sig of F	.650	.623	.214
Service			
Hypothesis SS	19.629	20.797	20.348
Error SS	602.215	601.075	576.443
F value	2.021	2.111	2.118
Sig of F	.113	.100	.100
Professional			
Hypothesis SS	6.845	4.327	6.760
Error SS	904.999	898.052	884.466
F value	.469	.294	.459
Sig of F	.704	.830	.712

Table 55 (continued)

Values for Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.000	.000	.000
F(max) criterion	4.888	5.083	4.938
With D. F.	(4,186)	(4,183)	(4,180)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

lambda were both non - significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to point in time during the term was 3.3%. The dimension reduction analysis revealed that none of the eigenvalues

were significantly different from 0, at the .05 level.

The univariate F tests seemed to indicate that the care/cure nursing role perspective scale showed a significant difference, at the .05 level, between the four points in time, when the scales were analyzed individually (see Table 55). This finding must be viewed cautiously since the multivariate tests were non-significant and both the conditions necessary for the univariate approach were not met. Bartlett's test revealed that the four scales were correlated. Also, the significance levels for the univariate statistics are not adjusted for the fact that several comparisons are being made.

To determine if the preceding situation held for the RN students taking non-nursing courses, this group was analyzed alone. When the mean scores on the four nursing role perspective variables for the four points in time during the term for the RN students taking non-nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 56). The values and the approximate Fs of the test statistics Pillai - Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of

Table 56

Values for Time Effect for Nursing Role Perception Variables for Each of Two Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Multivariate Tests of Significance		
Pillais		
Value	.077	.059
Approx F	1.225	.931
Sig of F	.262	.515
Wilks		
Value	.924	.941
Approx F	1.222	.934
Sig of F	.264	.512
Eigenvalue		
Root No. 1	.051	.052
Root No. 2	.024	.007
Root No. 3	.006	.003
Cannonical Corr		
Root No. 1	.220	.222
Root No. 2	.152	.081
Root No. 3	.076	.057
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.924	.941
F Value	1.222	.934
Sig of F	.264	.512
Roots	2 to 3	2 to 3
Value	.971	.990
F Value	.902	.303
Sig of F	.493	.935
Roots	3 to 3	3 to 3
Value	.994	.997
F Value	.540	.307
Sig of F	.584	.736

Table 56 (continued)

Values for Time Effect for Nursing Role Perception Variables for Each of Two Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Univariate F tests With D. F.	(3,186)	(3,186)
Care/Cure		
Hypothesis SS	6.839	6.265
Error SS	185.146	185.146
F value	2.290	2.098
Sig of F	.080	.102
Bureaucratic		
Hypothesis SS	2.613	6.326
Error SS	584.811	584.811
F value	.277	.671
Sig of F	.842	.571
Service		
Hypothesis SS	11.702	16.083
Error SS	602.215	602.215
F value	1.205	1.656
Sig of F	.309	.178
Professional		
Hypothesis SS	13.516	5.485
Error SS	904.999	904.999
F value	.926	.376
Sig of F	.429	.771
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.076	1.076
Approx p	.257	.257
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion With D. F.	4.888 (4,186)	4.888 (4,186)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)

homogeneity - of - dispersion matrices had not been violated. The amount of variance in the three scales that could be attributed to point in time during the term was 2.6%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate F tests revealed that all four scales showed a non-significant difference, at the .05 level, between the four points in time for the RN students taking non-nursing courses, with the RN students divided into two groups, when the scales were analyzed individually. This was to be expected since the multivariate tests were non-significant. Bartlett's test revealed that the four scales were correlated.

When the RN students were divided into the three groups and the mean scores of the four points in time, on the four nursing role perspective variables, across the three groups of RN students were analyzed, the results were essentially the same as when the analysis was done across the two groups (see Table 55).

When the RN students were divided into the three previously described groups and the RN students taking non-nursing courses were again analyzed alone, the results were essentially the same (see Table 57) as when they were a

Table 57

Values for Time Effect for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=19)
Multivariate Tests of Significance			
Pillais			
Value	.079	.089	.048
Approx F	1.238	1.390	.744
Sig of F	.253	.166	.708
Wilks			
Value	.922	.913	.952
Approx F	1.235	1.392	.744
Sig of F	.255	.166	.709
Eigenvalue			
Root No. 1	.052	.066	.040
Root No. 2	.024	.018	.008
Root No. 3	.006	.010	.001
Cannonical Corr			
Root No. 1	.224	.249	.197
Root No. 2	.153	.132	.090
Root No. 3	.077	.098	.037
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 3	1 to 3
Value	.922	.913	.952
F Value	1.235	1.392	.744
Sig of F	.255	.166	.709
Roots	2 to 3	2 to 3	2 to 3
Value	.971	.973	.991
F Value	.899	.827	.286
Sig of F	.496	.549	.943
Roots	3 to 3	3 to 3	3 to 3
Value	.994	.990	.999
F Value	.541	.890	.123
Sig of F	.583	.412	.885

(1) All values are rounded to three decimal places

Table 57 (continued)

Values for Time Effect for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=19)
Univariate F tests With D. F.	(3,183)	(3,183)	(3,183)
Care/Cure			
Hypothesis SS	6.839	11.054	3.684
Error SS	176.674	176.674	176.674
F value	2.361	3.816	1.272
Sig of F	.073	.011	.285
Bureaucratic			
Hypothesis SS	2.613	8.357	9.618
Error SS	573.162	573.162	573.162
F value	.278	.889	1.024
Sig of F	.841	.448	.383
Service			
Hypothesis SS	11.702	11.500	5.724
Error SS	601.075	601.075	601.075
F value	1.188	1.167	.581
Sig of F	.316	.324	.628
Professional			
Hypothesis SS	13.516	7.339	5.092
Error SS	898.052	898.052	898.052
F value	.918	.499	.346
Sig of F	.433	.684	.792
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.033	1.033	1.033
Approx p	.381	.381	.381
Statistics for Within Cells Corr			
Bartlett test			
Sig	.000	.000	.000
F(max) criterion With D. F.	5.083 (4,183)	5.083 (4,183)	5.083 (4,183)

(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)

part of the RN students divided into two groups (see Table 56), as described in the preceding section.

When the RN students were divided into the four groups and the mean scores of the four points in time, on the four nursing role perspective variables, across the four groups of RN students were analyzed, the results were essentially the same as when the analysis was done across the two groups and three groups (see Table 55) except that on the univariate F tests the care/cure nursing role perspective scale did not show a significant difference, at the .05 level, between the four points in time when the scales were analyzed individually (see Table 55). In addition, for this grouping, the assumption of homogeneity - of - dispersion matrices had been violated.

When the RN students were divided into the four previously described groups and the RN students taking non-nursing courses were again analyzed alone, the results were essentially the same (see Table 58) as when they were a part of the RN students divided into two groups (see Table 56) and three groups (see Table 57), as described in the preceding sections. The only difference was that the assumption of homogeneity - of - dispersion matrices had been violated.

Table 58

Values for Time Effect for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Multivariate Tests of Significance		
Pillais		
Value	.079	.050
Approx F	1.214	.762
Sig of F	.270	.690
Wilks		
Value	.922	.950
Approx F	1.211	.765
Sig of F	.272	.687
Eigenvalue		
Root No. 1	.052	.049
Root No. 2	.024	.004
Root No. 3	.006	.000
Cannonical Corr		
Root No. 1	.223	.215
Root No. 2	.154	.059
Root No. 3	.077	.022
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.922	.950
F Value	1.211	.765
Sig of F	.272	.687
Roots	2 to 3	2 to 3
Value	.971	.996
F Value	.893	.118
Sig of F	.500	.994
Roots	3 to 3	3 to 3
Value	.994	1.000
F Value	.538	.042
Sig of F	.585	.959

(1) All values are rounded to three decimal places

Table 58 (continued)

Values for Time Effect for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(3,180)	(3,180)
Care/Cure		
Hypothesis SS	6.839	8.375
Error SS	179.121	179.121
F value	2.291	2.805
Sig of F	.080	.041
Bureaucratic		
Hypothesis SS	2.613	.375
Error SS	546.025	546.025
F value	.287	.041
Sig of F	.835	.989
Service		
Hypothesis SS	11.702	4.333
Error SS	576.443	576.443
F value	1.218	.451
Sig of F	.305	.717
Professional		
Hypothesis SS	13.516	.375
Error SS	884.466	884.466
F value	.917	.025
Sig of F	.434	.994
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	4.938	4.938
With D. F.	(4,180)	(4,180)

(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

Table 58 (continued)

Values for Time Effect for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Multivariate Tests of Significance		
Pillais		
Value	.076	.090
Approx F	1.164	1.380
Sig of F	.306	.171
Wilks		
Value	.925	.912
Approx F	1.170	1.389
Sig of F	.302	.167
Eigenvalue		
Root No. 1	.064	.076
Root No. 2	.015	.014
Root No. 3	.001	.006
Cannonical Corr		
Root No. 1	.246	.265
Root No. 2	.122	.115
Root No. 3	.025	.078
Dimension Reduction Analysis		
Wilks lambda		
Roots	1 to 3	1 to 3
Value	.925	.912
F Value	1.170	1.389
Sig of F	.302	.167
Roots	2 to 3	2 to 3
Value	.984	.981
F Value	.468	.580
Sig of F	.832	.746
Roots	3 to 3	3 to 3
Value	.999	.994
F Value	.057	.541
Sig of F	.944	.583

(1) All values are rounded to three decimal places

Table 58 (continued)

Values for Time Effect for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Univariate F tests With D. F.	(3,180)	(3,180)
Care/Cure		
Hypothesis SS	.094	3.821
Error SS	179.121	179.121
F value	.031	1.280
Sig of F	.992	.283
Bureaucratic		
Hypothesis SS	14.344	30.393
Error SS	546.025	546.025
F value	1.576	3.340
Sig of F	.197	.021
Service		
Hypothesis SS	27.094	10.429
Error SS	576.443	576.443
F value	2.820	1.085
Sig of F	.040	.357
Professional		
Hypothesis SS	13.250	12.393
Error SS	884.466	884.466
F value	.899	.841
Sig of F	.443	.473
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion With D. F.	4.938 (4,180)	4.938 (4,180)

(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

For the RN students taking non-nursing courses, there was no significant difference, on the nursing role perspective variables, between the four points in time during the term when they were a part of the two, three, and four groupings of RN students.

13. For RN students in a BSN program taking nursing courses, is their nursing role perspective different across four time points during the term? When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 56). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to point in time during the term was 2.0%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate F tests revealed that all four scales

showed a non-significant difference, at the .05 level, between the four points in time for the RN students taking nursing courses, with the RN students divided into two groups, when the scales were analyzed individually. This was to be expected since the multivariate tests were non-significant. Bartlett's test revealed that the four scales were correlated.

With the RN students divided into the three previously described groups, the two groups of RN students taking nursing courses within this grouping were each analyzed alone. When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking their first nursing theory course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 57). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to point in time during the term was only 3.0%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different

from 0, at the .05 level.

When the mean scores of the four nursing role perspective variables, for the RN students taking their first nursing theory course, were analyzed individually, there was a significant difference, at the .05 level, between the four points in time during the term on only the care/cure scale (see Table 57). But this finding must be viewed with much reservation since the multivariate statistics were not significant and Bartlett's test confirmed that the nursing role perspective variables were correlated.

When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking their first nursing clinical course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 57). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to point in time during the term

was only 1.6%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the four nursing role perspective variables, for the RN students taking their first nursing clinical course, were analyzed individually, there was no significant difference, at the .05 level, between the four points in time during the term for any of the four scales (see Table 57). This was to be expected since the multivariate statistics were not significant. Bartlett's test confirmed that the nursing role perspective variables were correlated.

With the RN students divided into the four previously described groups, the three groups of RN students taking nursing courses within this grouping were each analyzed alone. When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking their first nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 58). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non -

significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the four scales that could be attributed to point in time during the term was only 1.7%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the four nursing role perspective variables, for the RN students taking their first nursing course, were analyzed individually, there was a significant difference, at the .05 level, between the four points in time during the term on only the care/cure scale (see Table 58). But this finding must be viewed with much reservation since the multivariate statistics were not significant and Bartlett's test confirmed that the nursing role perspective variables were correlated.

When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking their second or third nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 58). The values and the approximate Fs of the test

statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the four scales that could be attributed to point in time during the term was only 2.5%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate F tests seem to indicate that only the Service scale showed a significant difference, at the .05 level, between the four points in time for the RN students taking their second or third nursing course, with the RN students divided into four groups, when the scales were analyzed individually (see Table 58). This finding must be viewed with much reservation since the multivariate statistics were not significant and Bartlett's test revealed that the four scales were correlated.

When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking their fourth nursing course were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant difference between the four points in time on any of the nursing role perspective variables (see Table 58). The

values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non - significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the four scales that could be attributed to point in time during the term was only 3.0%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

When the mean scores of the four nursing role perspective variables, for the RN students taking their fourth nursing course, were analyzed individually, only the Bureaucratic scale showed a significant difference, at the .05 level, between the four points in time during the term (see Table 58). Again, this finding must be viewed with much reservation since the multivariate statistics were not significant and Bartlett's test confirmed that the nursing role perspective variables were correlated.

There was no significant difference, across the four points in time, on the nursing role perspective variables, for the RN students taking their first nursing theory course, their first nursing clinical course, their first nursing course, their second or third nursing course, or their fourth nursing course. There was also no significant

difference when all the RN students taking nursing courses were considered as one group

The possible interaction of the factors of group and time were also investigated. When the mean scores on the four nursing role perspective variables, for the two groups of RN students and the four points in time during the term, were analyzed simultaneously by repeated measures multivariate analysis of variance, there was no significant interaction between group and time (see Table 59). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non - significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to interaction of the factors was only 1.2%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate statistics revealed that there was no significant interaction, at the .05 level, between the factors of group and time on any of the four scales when the scales were analyzed individually with the RN students divided into two groups (see Table 59). Bartlett's test confirmed that the nursing role perspective variables were correlated.

Table 59

Values for Group by Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Tests of Significance			
Pillais			
Value	.035	.111	.187
Approx F	.546	.871	.980
Sig of F	.885	.644	.505
Wilks			
Value	.965	.893	.824
Approx F	.542	.866	.977
Sig of F	.887	.651	.509
Eigenvalue			
Root No. 1	.021	.063	.102
Root No. 2	.013	.023	.053
Root No. 3	.002	.021	.027
Root No. 4		.009	.018
Cannonical Corr			
Root No. 1	.144	.243	.304
Root No. 2	.113	.151	.224
Root No. 3	.040	.143	.163
Root No. 4		.093	.131
Dimension Reduction Analysis			
Wilks lambda			
Roots	1 to 3	1 to 4	1 to 4
Value	.965	.893	.824
F Value	.542	.866	.977
Sig of F	.887	.651	.509
Roots	2 to 3	2 to 4	2 to 4
Value	.986	.949	.908
F Value	.442	.640	.726
Sig of F	.851	.842	.824
Roots	3 to 3	3 to 4	3 to 4
Value	.998	.971	.957
F Value	.147	.674	.575
Sig of F	.863	.715	.827
Roots		4 to 4	4 to 4
Value		.991	.983
F Value		.534	.526
Sig of F		.659	.788

Table 59 (continued)

Values for Group by Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Univariate F tests With D. F.	(3,186)	(6,183)	(9,180)
Care/Cure			
Hypothesis SS	.405	8.878	6.430
Error SS	185.146	176.674	179.121
F value	.136	1.533	.718
Sig of F	.939	.170	.692
Bureaucratic			
Hypothesis SS	3.646	15.296	42.432
Error SS	584.811	573.162	546.025
F value	.387	.814	1.554
Sig of F	.763	.560	.132
Service			
Hypothesis SS	8.019	9.160	33.792
Error SS	602.215	601.075	576.443
F value	.826	.465	1.172
Sig of F	.481	.834	.315
Professional			
Hypothesis SS	12.407	19.354	32.940
Error SS	904.999	898.052	884.466
F value	.850	.657	.745
Sig of F	.468	.684	.667

Table 59 (continued)

Values for Group by Time Effect for Nursing Role Perspective Variables

	Number of Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.076	1.033	1.222
Approx p	.257	.381	.043
Statistics for Within Cells Corr			
Bartlett test			
Sig	.000	.000	.000
F(max) criterion	4.888	5.083	4.938
With D. F.	(4,186)	(4,183)	(4,180)

N= One subject who completed the role strain scales did not complete the nursing role perspective scales
(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
(3) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
(4) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

With the RN students divided into the three groups, and the mean scores on the four nursing role perspective variables analyzed simultaneously by repeated measures multivariate analysis of variance over the four points in time, there was no significant interaction between group and

time (see Table 59). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05 level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had not been violated. The amount of variance in the four scales that could be attributed to interaction of the factors was only 2.8%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate statistics also revealed that there was no significant interaction, at the .05 level, between the factors of group and time on any of the four scales when the scales were analyzed individually with the RN students divided into the three groups (see Table 59). Bartlett's test confirmed that the nursing role perspective variables were dependent.

When the RN students were divided into the four groups, and the mean scores on the four nursing role perspective variables were analyzed simultaneously by repeated measures multivariate analysis of variance over the four points in time, there was no significant interaction between group and time (see Table 59). The values and the approximate Fs of the test statistics Pillai-Bartlett trace and Wilks' lambda were both non-significant at the .05

level. Box's M revealed that the assumption of homogeneity - of - dispersion matrices had been violated. The amount of variance in the four scales that could be attributed to interaction of the factors was 4.7%. The dimension reduction analysis revealed that none of the eigenvalues were significantly different from 0, at the .05 level.

The univariate statistics also revealed that there was no significant interaction, at the .05 level, between the factors of group and time on any of the four scales, when the scales were analyzed individually with the RN students divided into four groups (see Table 59). Bartlett's test confirmed that the nursing role perspective variables were correlated.

14. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different for time point one and time point four during the term? When the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking non-nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, the second orthonormalized contrast was between time point one (the first week of the term) and time point four (the last week of the term). With the RN students divided into two groups,

this contrast was significant at the .05 level for the care/cure scale but not for the other three scales (see Table 60 and Figures 10, 11, 12, and 13).

With the RN students divided into the three groups, this contrast, for the RN students taking non-nursing courses, was again significant at the .05 level for the care/cure scale but not for the other scales (see Table 61 and Figures 14, 15, 16, and 17).

When the RN students were divided into the four groups, this contrast was also significant at the .05 level for the care/cure scale, but, again, not for the other three scales, for the RN students taking non-nursing courses, (see Table 62 and Figures 18, 19, 20, and 21).

The RN students taking non-nursing courses had significantly more care perspective at the end of the term than at the beginning, but there was no difference in bureaucratic, service, or professional perspective. This finding held whether the RN students taking non-nursing courses were a part of the two, three, or four groupings of RN students.

15. For RN students in a BSN program taking nursing courses, is their nursing role perspective different for time point one and time point four during the term? When

Table 60

Values for Contrast of Time One with Time Four for Nursing Role Perspective Variables for Each of Two Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Univariate F tests With D. F.	(1,62)	(1,62)
Care/Cure		
Hypothesis SS	6.452	4.379
Error SS	97.670	97.670
F value	4.095	2.780
Sig of F	.047	.101
Bureaucratic		
Hypothesis SS	.145	4.909
Error SS	225.446	225.446
F value	.040	1.350
Sig of F	.842	.250
Service		
Hypothesis SS	.258	12.742
Error SS	213.500	213.500
F value	.075	3.700
Sig of F	.785	.059
Professional		
Hypothesis SS	7.806	.545
Error SS	300.648	300.648
F value	1.610	.112
Sig of F	.209	.738
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.076	1.076
Approx p	.257	.257
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion With D. F.	9.063 (12,62)	9.063 (12,62)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)

Table 61

Values for Contrast of Time One with Time Four for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=19)
Univariate F tests With D. F.	(1,61)	(1,61)	(1,61)
Care/Cure			
Hypothesis SS	6.452	2.286	2.132
Error SS	97.631	97.631	97.631
F value	4.031	1.428	1.332
Sig of F	.049	.237	.253
Bureaucratic			
Hypothesis SS	.145	.036	7.605
Error SS	222.714	222.714	222.714
F value	.040	.010	2.083
Sig of F	.843	.922	.154
Service			
Hypothesis SS	.258	9.143	4.447
Error SS	212.652	212.652	212.652
F value	.074	2.623	1.276
Sig of F	.786	.111	.263
Professional			
Hypothesis SS	7.806	6.036	1.289
Error SS	293.868	293.868	293.868
F value	1.620	1.253	.268
Sig of F	.208	.267	.607
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.033	1.033	1.033
Approx p	.381	.381	.381
Statistics for Within Cells Corr			
Bartlett test			
Sig	.000	.000	.000
F(max) criterion	10.766	10.766	10.766
With D. F.	(12,61)	(12,61)	(12,61)

(1) All values are rounded to three decimal places
(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)

Table 62

Values for Contrast of Time One with Time Four for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(1,60)	(1,60)
Care/Cure		
Hypothesis SS	6.452	3.361
Error SS	96.839	96.839
F value	3.997	2.082
Sig of F	.050	.154
Bureaucratic		
Hypothesis SS	.145	.250
Error SS	210.257	210.257
F value	.041	.071
Sig of F	.839	.790
Service		
Hypothesis SS	.258	4.000
Error SS	209.349	209.349
F value	.074	1.146
Sig of F	.787	.289
Professional		
Hypothesis SS	7.806	.000
Error SS	299.345	299.345
F value	1.565	.000
Sig of F	.216	1.000
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	9.737	9.737
With D. F.	(12,60)	(12,60)

(1) All values are rounded to three decimal places

Table 62 (continued)

Values for Contrast of Time One with Time Four for Nursing Role Perspective Variables for Each of Four Groups of RN Students

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Univariate F tests With D. F.	(1,60)	(1,60)
Care/Cure		
Hypothesis SS	.063	1.786
Error SS	96.839	96.839
F value	.039	1.106
Sig of F	.845	.297
Bureaucratic		
Hypothesis SS	1.563	18.286
Error SS	210.257	210.257
F value	.446	5.218
Sig of F	.507	.026
Service		
Hypothesis SS	12.250	.643
Error SS	209.349	209.349
F value	3.511	.184
Sig of F	.066	.669
Professional		
Hypothesis SS	.063	1.786
Error SS	299.345	299.345
F value	.013	.358
Sig of F	.911	.552
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	9.737	9.737
With D. F.	(12,60)	(12,60)

(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

the mean scores on the four nursing role perspective variables, for the four points in time during the term, for the RN students taking nursing courses were analyzed simultaneously by repeated measures multivariate analysis of variance, the first orthonormalized contrast was between time point one (the first week of the term) and time point four (the last week of the term). With the RN students divided into two groups, this contrast was not significant for any of the scales at the .05 level (see Table 60 and Figures 10, 11, 12, and 13).

With the RN students divided into the three groups, this contrast was not significantly different at the, .05 level, for any of the nursing role perspective variables, for either the RN students taking their first nursing theory course or their first nursing clinical course (see Table 61 and Figures 14, 15, 16, and 17).

With the RN students divided into the four groups, this contrast was only significantly different, at the .05 level, on the Bureaucratic scale for the RN students taking their fourth nursing course (see Table 62 and Figures 18, 19, 20, and 21).

The RN students taking nursing courses, with the RN students divided into the two groupings, had no significant difference in the care/cure, bureaucratic, service, or

professional perspective scale between the end of the term and the beginning of the term. With the RN students taking nursing courses divided into those taking their first nursing theory course and those taking their first nursing clinical course, there was no significant difference between the beginning and end of the term in any of the nursing role perspective variables for either grouping. When the RN students taking nursing courses were divided into those taking their first nursing course, those taking their second or third nursing course, and those taking their fourth nursing course, only the grouping taking their fourth nursing course showed a significant difference between the first week and the last week of the term on the nursing role perspective variables, and this grouping showed a difference on only the Bureaucratic variable. This difference was an increase in the Bureaucratic variable at the end of the term in comparison with the beginning of the term.

16. For RN students in a BSN program taking non-nursing courses, is there a pattern to their nursing role perspective across the four time points during the term? Orthogonal polynomial contrasts were used for the multivariate analysis of variance to determine if there was a significant linear, quadratic, or cubic trend of any of the nursing role perspective variables across the four points in time for the RN students taking non-nursing

courses (Kirk, 1968, pp. 70-73, 114-127; Norusis, 1985, p. 268). The analysis was first performed with the RN students divided into the two previously described groups. For the care/cure perspective, only the linear component of the trend was significant at the .05 level (see Table 63 and Figure 10). For the bureaucratic, service , and professional perspectives none of the trends were significant, at the .05 level (see Table 63 and Figures 11, 12, and 13).

With the RN students divided into the three previously described groups, the RN students taking non-nursing courses again showed a significant linear component trend, at the .05 level, for the care/cure perspective (see Table 64 and Figure 14). As in the previous grouping, the bureaucratic, service, and professional perspectives had no significant trends at the .05 level (see Table 64 and Figures 15, 16, and 17).

When the RN students taking non-nursing courses were one of the groups making up the four groups of RN students, the results of the orthogonal polynomial contrasts were the same as when they were a part of the three groups and two groups of RN students (see Table 65 and Figures 18, 19, 20, and 21).

Table 63

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Two Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Univariate F tests With D. F.	(1,62)	(1,62)
Care/Cure		
Linear		
Hypothesis SS	6.606	5.274
Error SS	93.869	93.869
F value	4.364	3.484
Sig of F	.041	.067
Quadratic		
Hypothesis SS	.129	.917
Error SS	40.704	40.704
F value	.197	1.396
Sig of F	.659	.242
Cubic		
Hypothesis SS	.103	.074
Error SS	50.573	50.573
F value	.127	.091
Sig of F	.723	.764
Bureaucratic		
Linear		
Hypothesis SS	.026	6.014
Error SS	271.611	271.611
F value	.006	1.373
Sig of F	.939	.246
Quadratic		
Hypothesis SS	2.065	.189
Error SS	126.996	126.996
F value	1.008	.092
Sig of F	.319	.762
Cubic		
Hypothesis SS	.523	.123
Error SS	186.205	186.205
F value	.174	.041
Sig of F	.678	.840

Table 63 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Two Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Service		
Linear		
Hypothesis SS	1.976	15.456
Error SS	232.168	232.168
F value	.528	4.128
Sig of F	.470	.046
Quadratic		
Hypothesis SS	2.911	.371
Error SS	185.718	185.718
F value	.972	.124
Sig of F	.328	.726
Cubic		
Hypothesis SS	6.815	.256
Error SS	184.329	184.329
F value	2.292	.086
Sig of F	.135	.770
Professional		
Linear		
Hypothesis SS	7.903	1.964
Error SS	379.933	379.933
F value	1.290	.320
Sig of F	.260	.573
Quadratic		
Hypothesis SS	5.452	.030
Error SS	305.518	305.518
F value	1.106	.006
Sig of F	.297	.938
Cubic		
Hypothesis SS	.161	3.491
Error SS	219.548	219.548
F value	.046	.986
Sig of F	.832	.325

Table 63 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Two Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses (n=33)
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.076	1.076
Approx p	.257	.257
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	9.334	9.334
With D. F.	(12,62)	(12,62)

(1) All values are rounded to three decimal places
(2) Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)

Table 64

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Three Groups of RN Students Across the Four Points in Time

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Clinical (n=19)
Univariate F tests With D. F.	(1,61)	(1,61)	(1,61)
Care/Cure			
Linear			
Hypothesis SS	6.606	3.004	2.368
Error SS	93.772	93.772	93.772
F value	4.298	1.954	1.541
Sig of F	.042	.167	.219
Quadratic			
Hypothesis SS	.129	7.875	1.316
Error SS	32.430	32.430	32.430
F value	.243	14.813	2.475
Sig of F	.624	.000	.121
Cubic			
Hypothesis SS	.103	.175	.000
Error SS	50.472	50.472	50.472
F value	.125	.212	.000
Sig of F	.725	.647	1.000
Bureaucratic			
Linear			
Hypothesis SS	.026	1.157	5.329
Error SS	271.138	271.138	271.138
F value	.006	.260	1.199
Sig of F	.940	.612	.278
Quadratic			
Hypothesis SS	2.065	.286	1.066
Error SS	125.834	125.834	125.834
F value	1.001	.139	.517
Sig of F	.321	.711	.475
Cubic			
Hypothesis SS	.523	6.914	3.224
Error SS	176.189	176.189	176.189
F value	.181	2.394	1.116
Sig of F	.672	.127	.295

Table 64 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Three Groups of RN Students Across the Four Points in Time

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Nursing Courses Clinical (n=19)
Service			
Linear			
Hypothesis SS	1.976	11.200	5.329
Error SS	231.095	231.095	231.095
F value	.522	2.956	1.407
Sig of F	.473	.091	.240
Quadratic			
Hypothesis SS	2.911	.071	.329
Error SS	185.688	185.688	185.688
F value	.956	.023	.108
Sig of F	.332	.879	.743
Cubic			
Hypothesis SS	6.815	.229	.066
Error SS	184.291	184.291	184.291
F value	2.256	.076	.022
Sig of F	.138	.784	.883
Professional			
Linear			
Hypothesis SS	7.903	7.232	.213
Error SS	374.451	374.451	374.451
F value	1.287	1.178	.035
Sig of F	.261	.282	.853
Quadratic			
Hypothesis SS	5.452	.018	.013
Error SS	305.517	305.517	305.517
F value	1.088	.004	.003
Sig of F	.301	.953	.959
Cubic			
Hypothesis SS	.161	.089	4.866
Error SS	218.084	218.084	218.084
F value	.045	.025	1.361
Sig of F	.833	.875	.248

Table 64 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Three Groups of RN Students Across the Four Points in Time

	Groups		
	Non-nursing Courses (n=31)	Nursing Courses Theory (n=14)	Clinical (n=19)
Multivariate Test for Homogeneity of Dispersion Matrices			
Boxs M			
F value	1.033	1.033	1.033
Approx p	.381	.381	.381
Statistics for Within Cells Corr			
Bartlett test			
Sig	.000	.000	.000
F(max) criterion	11.546	11.546	11.546
With D. F.	(12,61)	(12,61)	(12,61)

(1) All values are rounded to three decimal places
(2) Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)

Table 65

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Univariate F tests With D. F.	(1,60)	(1,60)
Care/Cure		
Linear		
Hypothesis SS	6.606	4.225
Error SS	92.798	92.798
F value	4.272	2.732
Sig of F	.043	.104
Quadratic		
Hypothesis SS	.129	4.014
Error SS	35.826	35.826
F value	.216	6.722
Sig of F	.644	.012
Cubic		
Hypothesis SS	.103	.136
Error SS	50.497	50.497
F value	.123	.162
Sig of F	.727	.689
Bureaucratic		
Linear		
Hypothesis SS	.026	.136
Error SS	259.725	259.725
F value	.006	.031
Sig of F	.939	.860
Quadratic		
Hypothesis SS	2.065	.014
Error SS	113.069	113.069
F value	1.096	.007
Sig of F	.299	.932
Cubic		
Hypothesis SS	.523	.225
Error SS	173.232	173.232
F value	.181	.078
Sig of F	.672	.781

Table 65 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses First (n=31)	Nursing Courses First (n=18)
Service		
Linear		
Hypothesis SS	1.976	4.011
Error SS	223.050	223.050
F value	.531	1.079
Sig of F	.469	.303
Quadratic		
Hypothesis SS	2.911	.222
Error SS	175.942	175.942
F value	.993	.076
Sig of F	.323	.784
Cubic		
Hypothesis SS	6.815	.100
Error SS	177.451	177.451
F value	2.304	.034
Sig of F	.134	.855
Professional		
Linear		
Hypothesis SS	7.903	.025
Error SS	377.468	377.468
F value	1.256	.004
Sig of F	.267	.950
Quadratic		
Hypothesis SS	5.452	.125
Error SS	289.263	289.263
F value	1.131	.026
Sig of F	.292	.873
Cubic		
Hypothesis SS	.161	.225
Error SS	217.735	217.735
F value	.044	.062
Sig of F	.834	.804

Table 65 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Non-nursing Courses (n=31)	Nursing Courses First (n=18)
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	10.536	10.536
With D. F.	(12,60)	(12,60)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

Table 65 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Univariate F tests With D. F.	(1,60)	(1,60)
Care/Cure		
Linear		
Hypothesis SS	.056	2.064
Error SS	92.798	92.798
F value	.036	1.335
Sig of F	.849	.253
Quadratic		
Hypothesis SS	.031	1.750
Error SS	35.826	35.826
F value	.052	2.931
Sig of F	.820	.092
Cubic		
Hypothesis SS	.006	.007
Error SS	50.497	50.497
F value	.007	.008
Sig of F	.932	.927
Bureaucratic		
Linear		
Hypothesis SS	4.556	13.207
Error SS	259.725	259.725
F value	1.053	3.051
Sig of F	.309	.086
Quadratic		
Hypothesis SS	3.781	10.321
Error SS	113.069	113.069
F value	2.007	5.477
Sig of F	.162	.023
Cubic		
Hypothesis SS	6.006	6.864
Error SS	173.232	173.232
F value	2.080	2.377
Sig of F	.154	.128

Table 65 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Service		
Linear		
Hypothesis SS	20.306	.257
Error SS	223.050	223.050
F value	5.462	.069
Sig of F	.023	.793
Quadratic		
Hypothesis SS	.781	9.143
Error SS	175.942	175.942
F value	.266	3.118
Sig of F	.608	.083
Cubic		
Hypothesis SS	6.006	1.029
Error SS	177.451	177.451
F value	2.031	.348
Sig of F	.159	.558
Professional		
Linear		
Hypothesis SS	.625	3.779
Error SS	377.468	377.468
F value	.099	.601
Sig of F	.754	.441
Quadratic		
Hypothesis SS	10.125	6.036
Error SS	289.263	289.263
F value	2.100	1.252
Sig of F	.152	.268
Cubic		
Hypothesis SS	2.500	2.579
Error SS	217.735	217.735
F value	.689	.711
Sig of F	.410	.403

Table 65 (continued)

Values for Orthogonal Polynomial Contrasts for Nursing Role Perspective Variables for Each of Four Groups of RN Students Across the Four Points in Time

	Groups	
	Nursing Courses Second/Third (n=8)	Nursing Courses Fourth (n=7)
Multivariate Test for Homogeneity of Dispersion Matrices		
Boxs M		
F value	1.222	1.222
Approx p	.043	.043
Statistics for Within Cells Corr		
Bartlett test		
Sig	.000	.000
F(max) criterion	10.536	10.536
With D. F.	(12,60)	(12,60)

(1) All values are rounded to three decimal places
(2) Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)

For RN students taking non-nursing courses, the only pattern that was significant across the four points in time during the term, was linear for the care/cure perspective. The other nursing role perspective variables had no significant trends.

17. For RN students in a BSN program taking nursing courses, is there a pattern to their nursing role perspective across the four time points during the term?

With the RN students taking nursing courses as a grouping of the previously described two groups, only the linear component of the trend for the service perspective was significant at the .05 level (see Table 63 and Figure 12). For the care/cure, bureaucratic, and professional perspectives, none of the trends were significant (see Table 63 and Figures 10, 11, and 13).

With the RN students divided into the three previously described groups, the RN students taking their first theoretical nursing course showed only a significant quadratic trend for the care/cure perspective (see Table 64 and Figures 14). None of the trends were significant, at the .05 level, for the bureaucratic, service, or professional perspectives. Those taking their first nursing clinical course showed no significant trends for the care/cure, bureaucratic, service, or professional perspectives (see Table 64 and Figures 14, 15, 16, and 17).

When the RN students were divided into the previously described four groups, those RN students taking their first nursing course showed only a significant quadratic trend for the care/cure perspective (see Table 65 and Figure 18). None of the trends were significant at the .05 level for the bureaucratic, service, or professional perspectives (see Table 65 and Figures 19, 20, and 21). Those taking their

second or third nursing course showed only a linear significant trend, at the .05 level, for the service perspective (see Table 65 and Figures 20). None of the three trends (linear, quadratic, and cubic) were significant, at the .05 level, for the care/cure, bureaucratic, or professional perspectives (see Table 65 and Figures 18, 19, and 21). Those RN students taking their fourth nursing course showed only a significant quadratic trend for the bureaucratic perspective, at the .05 level (see Table 65 and Figure 19). None of the trends were significant for the care/cure, service, or professional perspectives (see Table 65 and Figures 18, 20, and 21).

With the RN students divided into two groups, the only significant trend, for those RN students taking nursing courses, was the linear component for the service perspective. When the RN students were divided into three groups, only the quadratic trend of the care/cure perspective was significant for those RN students taking their first theory nursing course. For those taking their first clinical nursing course, none of the trends were significant for any of the nursing role perspective variables. With the RN students divided into four groups, only the quadratic trend for the care/cure perspective was significant for those RN students taking their first nursing course. For those taking their second or third nursing

course, only the linear component was significant for the service perspective. For those RN students taking their fourth nursing course, the only component significant was the quadratic component for the bureaucratic perspective.

18. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses? With the RN students divided into the previously described two groups, none of the categorical demographic variables when entered, one at a time, as factors or the ordinal demographic variables when entered, all together, as constant covariates, into the doubly multivariate repeated measures analysis of variance resulted in a significant difference between the two groups, at the .05 level, on the nursing role perspective variables.

With the RN students divided into the previously described three groups, none of the demographic variables, when entered into the analysis, resulted in a significant difference, at the .05 level, between the three groups on the nursing role perspective variables.

With the RN students divided into the previously described four groups, none of the demographic variables, when entered into the analysis, resulted in a significant

difference, at the .05 level, between the four groups on the nursing role perspective variables.

When the demographic variables were considered, none of them resulted in a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the nursing role perspective variables, regardless of whether they were a part of the two, three, or four groupings of RN students.

Further analysis of the demographic variables is beyond the scope of this study.

19. With the role strain variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses? With the RN students divided into the previously described two groups, none of the role strain variables when entered, as covariates, into the doubly multivariate repeated measures analysis of variance resulted in a significant difference between the two groups, at the .05 level, on the nursing role perspective variables.

With the RN students divided into the previously described three groups, none of the role strain variables, when entered into the analysis, resulted in a significant

difference, at the .05 level, between the three groups on the nursing role perspective variables.

With the RN students divided into the previously described four groups, none of the role strain variables, when entered into the analysis, resulted in a significant difference, at the .05 level, between the four groups on the nursing role perspective variables.

When the role strain variables were considered, none of them resulted in a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the nursing role perspective variables, regardless of whether they were a part of the two, three, or four groupings of RN students.

Further analysis of the relationship of the role strain variables to the nursing role perspective variables is beyond the scope of this study.

Summary

The summary of the findings of this study, which is presented below, follows the sequence of the original research questions which this study sought to answer. Also these finding are presented in summary form in Tables 66 and

67.

The contents of the open-ended questions and interviews will be used to aid in the interpretation of the quantitative data in Chapter V, Discussion (Fielding & Fielding, 1986, p. 76).

1. Do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses?

No significant differences were found between the groups of RN students taking nursing courses and those taking non-nursing courses, with any of the three groupings of RN students, on the mean scores, across time, of the role strain variables.

2. Do RN students in a BSN program taking nursing courses evidence more role strain at each of four time points during a term than those taking non-nursing courses?

There was no significant difference, at any of the four points in time, on the role strain variables, between any of the groupings of the RN students taking nursing courses and those taking non-nursing courses.

3. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different across four

time points during the term?

For the RN students taking non-nursing courses, there was a significant difference, on the role strain variables, between the four points in time during the term when they were a part of the two, three, and four groupings of RN students. All three role strain variables seemed to contribute to this difference.

4. For RN students in a BSN program taking nursing courses, is the amount of role strain different across four time points during the term?

There was no significant difference, across the four points in time, on the role strain variables, for the RN students taking their first nursing theory course, their first nursing course, or their fourth nursing course. There was a significant difference when all the RN students taking nursing courses were considered as one group and when only those taking their first nursing clinical course were considered as one group. The state anxiety scale seemed to be the contributing variable to this significance for both of the groupings. There was also a significant difference for those taking their second or third nursing course. All of the role strain variables seemed to contribute to this significance.

5. For RN students in a BSN program taking non-nursing courses, is the amount of role strain different for time point one and time point four during the term?

The RN students taking non-nursing courses had significantly less anxiety at the end of the term than at the beginning, but there was no difference in hostility or depression. This finding held whether the RN students taking non-nursing courses were a part of the two, three, or four groupings of RN students.

6. For RN students in a BSN program taking nursing courses, is the amount of role strain different for time point one and time point four during the term?

The RN students taking nursing courses, with the RN students divided into the two groupings, had significantly less anxiety at the end of the term than at the beginning, but there was no difference in hostility or depression. With the RN students taking nursing courses divided into those taking their first nursing theory course and those taking their first nursing clinical course, there was no significant difference between the beginning and end of the term in state anxiety, hostility, or depression for either grouping. When the RN students taking nursing courses were divided into those taking their first nursing course, those taking their second or third nursing course, and those

taking their fourth nursing course, only the grouping taking their second or third nursing course showed a significant difference between the first week and the last week of the term on the role strain variables, and this grouping showed a difference on all three role strain variables (state anxiety, hostility, and depression). This difference was a decrease in all three role strain variables at the end of the term in comparison with the beginning of the term.

7. For RN students in a BSN program taking non-nursing courses, is there a pattern to role strain across the four time points during the term?

For RN students taking non-nursing courses, the pattern across the four points in time during the term was cubic for state anxiety, linear and cubic for hostility, and cubic for depression.

8. For RN students in a BSN program taking nursing courses, is there a pattern to role strain across the four time points during the term?

With the RN students divided into two groups, the only significant trends, for those RN students taking nursing courses, were the linear and quadratic components for state anxiety. When the RN students were divided into three groups, none of the trends were significant for those RN

students taking their first theory nursing course. For those taking their first clinical nursing course, the quadratic component was significant for state anxiety and the cubic component for state anxiety and depression. With the RN students divided into four groups, none of the trends were significant for those RN students taking their first nursing course. For those taking their second or third nursing course, the linear component was significant for hostility and the quadratic and cubic components were significant for state anxiety, hostility, and depression. For those RN students taking their fourth nursing course, the only component significant was the quadratic component for state anxiety.

9. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence more role strain during a term than those taking non-nursing courses?

When the demographic variables were considered, the only one that made a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the role strain variables, was the time of day the RN student took the class. State anxiety seemed to be the role strain variable that contributed to this difference between the two groups. RN students taking day nursing

classes appeared to evidence the most state anxiety. None of the demographic variables, when considered, made a significant difference between the RN students taking their first nursing theory course, first nursing clinical course, and the RN students taking non-nursing courses, on the role strain variables. The only demographic variables, when considered, that made a significant difference between the RN students taking their first, second or third, and fourth nursing course and those taking non-nursing courses, on the role strain variables, was whether or not the RN student had the role of wife/husband. State anxiety and depression seemed to be the role strain variables that contributed to this difference between the four groups. But, on further examination of the means of the classification cells of these variables it was noted that the most frequent highest and lowest means were attributable to only three RN students.

10. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

No significant differences were found between the groups, with any of the three groupings of RN students, on the mean scores, across time, of the nursing role perspective variables.

11. Do RN students in a BSN program taking nursing courses evidence a different nursing role perspective at each of four time points during a term than those taking non-nursing courses?

There was no significant difference, at any of the four points in time, on the nursing role perspective variables, between any of the groupings of the RN students.

12. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different across four time points during the term?

For the RN students taking non-nursing courses, there was no significant difference, on the nursing role perspective variables, between the four points in time during the term when they were a part of the two, three, and four groupings of RN students.

13. For RN students in a BSN program taking nursing courses, is their nursing role perspective different across four time points during the term?

There was no significant difference, across the four points in time, on the nursing role perspective variables, for the RN students taking their first nursing theory course, their first nursing clinical course, their first nursing course, their second or third nursing course, or

their fourth nursing course. There was also no significant difference when all the RN students taking nursing courses were considered as one group.

14. For RN students in a BSN program taking non-nursing courses, is their nursing role perspective different for time point one and time point four during the term?

The RN students taking non-nursing courses had significantly more care perspective at the end of the term than at the beginning, but there was no difference in bureaucratic, service, or professional perspective. This finding held whether the RN students taking non-nursing courses were a part of the two, three, or four groupings of RN students.

15. For RN students in a BSN program taking nursing courses, is their nursing role perspective different for time point one and time point four during the term?

The RN students taking nursing courses, with the RN students divided into the two groupings, had no significant difference in the care/cure, bureaucratic, service, or professional perspective at the end of the term than at the beginning. With the RN students taking nursing courses divided into those taking their first nursing theory course

and those taking their first nursing clinical course, there was no significant difference between the beginning and end of the term on any of the nursing role perspective variables for either grouping. When the RN students taking nursing courses were divided into those taking their first nursing course, those taking their second or third nursing course, and those taking their fourth nursing course, only the grouping taking their fourth nursing course showed a significant difference between the first week and the last week of the term on the nursing role perspective variables, and this grouping showed a difference on only the Bureaucratic variable. This difference was an increase in the Bureaucratic variable at the end of the term in comparison with the beginning of the term.

16. For RN students in a BSN program taking non-nursing courses, is there a pattern to their nursing role perspective across the four time points during the term?

For RN students taking non-nursing courses, the only pattern that was significant across the four points in time during the term, was linear for the care/cure perspective. The other nursing role perspective variables had no significant trends.

17. For RN students in a BSN program taking nursing

courses, is there a pattern to their nursing role perspective across the four time points during the term?

With the RN students divided into two groups, the only significant trend, for those RN students taking nursing courses, was the linear component for the service perspective. When the RN students were divided into three groups, only the quadratic trend of the care/cure perspective was significant for those RN students taking their first theory nursing course. For those taking their first clinical nursing course, none of the trends were significant for any of the nursing role perspective variables. With the RN students divided into four groups, only the quadratic trend for the care/cure perspective was significant for those RN students taking their first nursing course. For those taking their second or third nursing course, only the linear component was significant for the service perspective. For those RN students taking their fourth nursing course, the only component significant was the quadratic component for the bureaucratic perspective.

18. With the demographic variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

When the demographic variables were considered, none

of them resulted in a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the nursing role perspective variables, regardless of whether they were a part of the two, three, or four groupings of RN students.

19. With the role strain variables considered, do RN students in a BSN program taking nursing courses evidence a different nursing role perspective during a term than those taking non-nursing courses?

When the role strain variables were considered, none of them resulted in a significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the nursing role perspective variables, regardless of whether they were a part of the two, three, or four groupings of RN students.

Table 66

Summary of Findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			
Group by Time			
Multivar	ns	ns	s
Univar			
Anxiety	ns	ns	ns
Hostility	s	ns	s
Depression	ns	ns	ns
Group			
Multivar	ns	ns	ns
Univar			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
At Each of Four Time Points			
Time 1			
Multivar	ns	ns	ns
Univar			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Time 2			
Multivar	ns	ns	ns
Univar			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Time 3			
Multivar	ns	ns	ns
Univar			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns

Table 66 (continued)

Summary of Findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			
Group(continued)			
Time 4			
Multivar	ns	ns	ns
Univar			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Demographic Variables			
Time of Class			
Multivar	s	ns	ns
Univar			
Anxiety	s	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Role of Wife/ Husband			
Multivar	ns	ns	s
Univar			
Anxiety	ns	ns	s
Hostility	ns	ns	ns
Depression	ns	ns	s
Time			
Multivar	s	s	s
Univar			
Anxiety	s	s	s
Hostility	s	s	s
Depression	s	s	s

Table 66 (continued)

Summary of Findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			
Time (continued)			
	Nursing Courses	First Theory	First Nursing
Multivar	s	ns	ns
Univar			
Anxiety	s	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
		First Clinical	2nd/3rd Nursing
Multivar		s	s
Univar			
Anxiety		s	s
Hostility		ns	s
Depression		ns	s
			Fourth Nursing
Multivar			ns
Univar			
Anxiety			ns
Hostility			ns
Depression			ns
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Multivar	s	s	s
Univar			
Anxiety	s	s	s
Hostility	s	s	s
Depression	s	s	s

Table 66 (continued)

Summary of Findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			
Time(continued)			
Time 1 vs Time 4			
	Nursing Courses	First Theory	First Nursing
Univar			
Anxiety	s	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
		First Clinical	2nd/3rd Nursing
Univar			
Anxiety		ns	s
Hostility		ns	s
Depression		ns	s
			Fourth Nursing
Univar			
Anxiety			ns
Hostility			ns
Depression			ns
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Univar			
Anxiety	s	s	s
Hostility	ns	ns	ns
Depression	ns	ns	ns

Table 66 (continued)

Summary of findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			
Time (continued)			
Orthogonal Polynomials			
	Nursing Courses	First Theory	First Nursing
Linear			
Anxiety	s	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Quadratic			
Anxiety	s	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Cubic			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
		First Clinical	2nd/3rd Nursing
Linear			
Anxiety		ns	ns
Hostility		ns	s
Depression		ns	ns
Quadratic			
Anxiety		s	s
Hostility		ns	s
Depression		ns	s
Cubic			
Anxiety		s	s
Hostility		ns	s
Depression		s	s
			Fourth Nursing
Linear			
Anxiety			ns
Hostility			ns
Depression			ns

Table 66 (continued)

Summary of findings for Role Strain Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=65)	Three (N=65)	Four (N=65)
EFFECT			Fourth Nursing (continued)
Time(continued)			
Quadratic			
Anxiety			s
Hostility			ns
Depression			ns
Cubic			
Anxiety			ns
Hostility			ns
Depression			ns
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Linear			
Anxiety	ns	ns	ns
Hostility	s	s	s
Depression	ns	ns	ns
Quadratic			
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	ns	ns	ns
Cubic			
Anxiety	s	s	s
Hostility	s	s	s
Depression	s	s	s

s= Significant at the .05 level
ns= Non-significant at the .05 level
Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=34)
Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=20)
Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=9)
RN students taking fourth nursing course(n=7)

Table 67

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Group by Time			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Group			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
At each of four time points			
Time 1			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Time 2			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Time 3			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns

Table 67 (continued)

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Group(continued)			
Time 4			
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Time			
Multivar	ns	ns	ns
Univar			
Care/Cure	s	s	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
	Nursing Courses	First Theory	First Nursing
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	s	s
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
		First Clinical	2nd/3rd Nursing
Multivar		ns	ns
Univar			
Care/Cure		ns	ns
Bureaucratic		ns	ns
Service		ns	s
Professional		ns	ns

Table 67 (continued)

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Time(continued)			
			Fourth Nursing
Multivar			ns
Univar			
Care/Cure			ns
Bureaucratic			s
Service			ns
Professional			ns
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Multivar	ns	ns	ns
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Time 1 vs Time 4			
	Nursing Courses	First Theory	First Nursing
Univar			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
		First Clinical	2nd/3rd Nursing
Univar			
Care/Cure		ns	ns
Bureaucratic		ns	ns
Service		ns	ns
Professional		ns	ns

Table 67 (continued)

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Time(continued)			
Time 1 vs Time 4(continued)			
			Fourth Nursing
Univar			
Care/Cure			ns
Bureaucratic			s
Service			ns
Professional			ns
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Univar			
Care/Cure	s	s	s
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Orthogonal Polynomials			
	Nursing Courses	First Theory	First Nursing
Linear			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	s	ns	ns
Professional	ns	ns	ns
Quadratic			
Care/Cure	ns	s	s
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Cubic			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns

Table 67 (continued)

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Time(continued)			
Orthogonal Polynomials(continued)			
		First Clinical	2nd/3rd Nursing
Linear			
Care/Cure		ns	ns
Bureaucratic		ns	ns
Service		ns	s
Professional		ns	ns
Quadratic			
Care/Cure		ns	ns
Bureaucratic		ns	ns
Service		ns	ns
Professional		ns	ns
Cubic			
Care/Cure		ns	ns
Bureaucratic		ns	ns
Service		ns	ns
Professional		ns	ns
			Fourth Nursing
Linear			
Care/Cure			ns
Bureaucratic			ns
Service			ns
Professional			ns
Quadratic			
Care/Cure			ns
Bureaucratic			s
Service			ns
Professional			ns
Cubic			
Care/Cure			ns
Bureaucratic			ns
Service			ns
Professional			ns

Table 67 (continued)

Summary of findings for Nursing Role Perspective Variables for Each of Three Groups of RN Students

	Groups		
	Two (N=64)	Three (N=64)	Four (N=64)
EFFECT			
Time(continued)			
Orthogonal			
Polynomials(continued)			
	Non-nursing Courses	Non-nursing Courses	Non-nursing Courses
Linear			
Care/Cure	s	s	s
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Quadratic			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns
Cubic			
Care/Cure	ns	ns	ns
Bureaucratic	ns	ns	ns
Service	ns	ns	ns
Professional	ns	ns	ns

s= Significant at the .05 level
ns= Non-significant at the .05 level
Two groups
RN students taking non-nursing courses(n=31)
RN students taking nursing courses(n=33)
Three groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing theory course(n=14)
RN students taking first nursing clinical course(n=19)
Four groups
RN students taking non-nursing courses(n=31)
RN students taking first nursing course(n=18)
RN students taking second or third nursing course(n=8)
RN students taking fourth nursing course(n=7)
N=One subject who completed the role strain scales did not complete the nursing role perspective scales

CHAPTER V

DISCUSSION

Role Strain Variables

The lack of significant differences between the RN students taking nursing courses and those taking non-nursing courses on the role strain variables was unexpected. This lack of difference was not only across all four time points but at each of the four points in time during the term. Even when the RN students taking nursing courses were divided into two groups, based on whether they were taking their first theory or first clinical nursing course, and three groups, based on whether they were taking their first, second or third, or fourth nursing course, the lack of significant differences persisted. This finding was unexpected for two reasons.

On the basis of the theoretical framework of this study, one would expect some role change to be occurring in the RN students taking nursing courses by at least their fourth nursing course. If this role change were occurring it should be manifested by greater anxiety, hostility, or depression, which are manifestations of role strain, in the

RN students taking nursing courses than in those taking non-nursing courses. But the RN students taking non-nursing courses, who it is assumed would be under no demands for role change, evidenced as much anxiety, hostility, and depression as the RN students taking nursing courses. Only three of the RN students taking nursing courses alluded to role strain connected to role change in their answers to the open-ended questions. One RN student talked of feelings of apathy and job dissatisfaction because of seeing the inadequacies in herself and others at work resulting from the exploration of issues in class. Another RN student spoke of feeling overwhelmed about where to start on the areas in nursing that needed improvement. The third RN student noted her increased sense of importance of the issues being discussed in class that related to situations at work such as autonomy in relation to a dress code and continuing education in relation to her co-workers' resistance to it. She related that she obtained support from the class members in sharing with them her feelings about these issues.

But, there was evidence of role strain being experienced by both the RN students taking nursing courses and those taking non-nursing courses. As noted above, there was only meager evidence that the role strain was related to a role change in nursing perspective. The role strain

experienced by these RN students was in relation to similar causes of role stress for both groups of RN students. In some RN students the same sources of role stress were manifested by anxiety, in others, hostility, and in others, depression. There were several major areas of role stress shared by both RN students taking nursing courses and those taking non-nursing courses.

Probably the most basic major area of role stress was the ambivalence or duress under which these RN students were attending school. Some wondered if they had made the right decision. Some questioned how it would benefit them. Others questioned, "Why am I putting myself through all this grief," "Why an I doing this; What am I seeking," "I'm not sure I would do it again if I had it to do over." Some were still considering getting a BA in a related field rather than completing the requirements for the BSN. Others didn't agree with the need for a BSN but felt under pressure from several sources to obtain the BSN: nursing service administrators in their place of employment, the ANA, their future professional advancement. Others didn't specify who or what was pressuring them to obtain the BSN but they felt they had to have it. "I have to do this to get the BSN," "I feel a weight on my shoulders to get the BSN," "It's something I have to do but I'm not looking forward to it." Hillsmith (1978) also found that the RN students in her

sample felt that the BSN had been imposed on them. Many regretted that they hadn't started earlier and were "overwhelmed" by the number of years it would take to get the BSN by attending school part time. This area of role stress is surprising when one remembers that the strongest motivator to return to school identified by both the RN students taking nursing courses and those taking non-nursing courses was, "to increase knowledge, understanding, and self-development."

Another common area of role stress for both the RN students taking nursing courses and those taking non-nursing courses was the disruption caused in their established life patterns by going to school. Smullen (1983, pp. 501-508) found a similar area of role stress. A common refrain was the stress and pressure experienced in trying to work full time, keep up with the expectations of the course(s) requirements, fulfill their roles as wife/husband/girlfriend and parent, manage a household, maintain friendships and a social life, and have some time just for themselves. As one RN student responded, "I wasn't told how pressured I would be with work, school, home, and family." Many mentioned the strain it put on their marriage and family relationships. They felt selfish and guilty in taking away time from their family. Many felt they were just trying to survive until the course was over. VanMeter and Agronow (1982) found that

important moderator variables in assessing the amount of role strain among married college women were: role priorities, being a parent, and needing child care arrangements. A common complaint was that of being tired because they had to take less time for sleep to make time for all they had to do. Some felt their families were more demanding of their time than usual. Many mentioned that the way they usually prepared for the upcoming holiday (Christmas) had to be sacrificed. This common experience of lifestyle change by both the RN students taking nursing courses and those taking non-nursing courses was also documented in the demographic data by both groups indicating a life style change between "somewhat" and "quite a bit." One of the RN students taking a non-nursing course related that she did find some relief from her frustration when she attended a new support group for RN students, set up and lead by a nursing instructor, to help RN students cope with their feelings of stress and frustration. None of the other RN students from this institution mentioned a support group.

Another common area of role stress was the demands and requirements of the course(s) the RN student was taking and the role strain s(he) felt because s(he) was not doing as well in the course(s) as her/his own self-expectations demanded. Many expressed anxiety and hesitancy because they

had not been in school for a number of years and didn't feel confident about their own academic ability. Upcoming exams were a common source of stress. Stress was also expressed concerning the end of term papers that were due. Papers were particularly difficult for them. They preferred objective type exams to papers. Many expressed frustration at not being prepared for class because they had not had time to complete the assigned readings. One of the RN students, in the telephone interview, gave an interesting interpretation of the high self-expectations that RN students have for their course work. "Nurses are very sensitive and emotional people. This carries over into their courses. They're climbing off the wall but other students are not that intense. Maybe it's the job that makes nurses different. They have to think all day and at the end of the day they're drained. We put pressure on ourselves. We don't want to say we don't know. We don't want to give up the image. We're dealing with life and death all day and we feel if we don't know, we shouldn't do it. Nurses talk but they won't ask questions. Others aren't afraid to say they made a mistake but nurses are."

It seems that the role strain these RN students, those taking non-nursing courses as well as those taking nursing courses, were experiencing was at least in part self-inflicted and a part of a vicious cycle. Because they

wanted to obtain the BSN as fast as possible, many were taking two and even three courses (many carried a laboratory component) a term and continuing to work full time. They felt role strain and just wanted to get the BSN over as fast as possible so they continued to take a heavy load of course work and work full time (financially, most could not afford to work only part time). "All I want to do is get done!" "I'll do anything to get my BSN." "I can't wait till it's over."

Another common area of role stress was the perception on the part of the RN students that the courses were a waste of their time, effort, energy, and money. They perceived that there was a lot of "busy work" connected with the courses. This comment usually related to papers that were a part of the course requirements. Many resented the high tuition they had to pay for courses that they felt were unnecessary or repetitive of ones they had already taken in their basic nursing program. As one student put it, "I feel the schools are out to make money on us." If they could not perceive that the course had a direct application to their work situation, they felt that the course was unnecessary and a waste of their time and energy. This evaluation was true for both RN students taking non-nursing courses and those taking nursing courses. Other RN students pointed out that it was not the course itself that was causing them

stress but disturbing situations at their job, family problems, health problems, financial concerns, lack of sleep, exams in other courses, or their own lack of confidence in their abilities.

The second reason that the finding, of no significant difference between the RN students taking nursing courses and those taking non-nursing courses on the role strain variables, was unexpected was that the review of pertinent literature and research on the RN student returning to school to pursue the BSN had focused on her experiences and reactions after she had completed the non-nursing courses and was taking nursing courses. No research was found, except one dissertation (Owen, 1984, P. 2944-A), that documented the existence or non-existence of role strain in RN students taking non-nursing courses. Owens did find that RN students indicated that liberal arts courses and the faculty teaching these courses, as well as their job and personal life during the liberal arts courses, contributed to their negative feeling and behavior during their BSN education. The descriptions of the stages/phases in the resocialization of the RN student that did encompass the time period of non-nursing courses referred to it as a "honeymoon" period. But one must remember that these models of resocialization were developed from a retrospective point of view of the faculty member or RN student. As is true

with many painful experiences, once one has been relieved of the painful experience, one no longer remembers the acuteness of the pain, especially if one moves into a new painful experience or even a pleasant, satisfying experience. Since this present study was a concurrent documentation of the evidence of role strain, this concurrent approach may explain why role strain was found in RN students taking non-nursing courses when the other approaches had not.

Another factor that may account for the finding of the same amount of role strain among RN students taking nursing and non-nursing courses in this study is that this information was deliberately elicited and encouraged from both groups of RN students. Nursing faculty who work with RN students in nursing courses make it a practice to encourage the RN students to verbalize their feelings and responses to their educational experience because they value the therapeutic effect of verbalized feeling in enhancing one's coping abilities. RN students may also more readily verbalize their feelings to nursing faculty than to non-nursing faculty because they see them as colleagues and better able to understand their sources of anxiety, frustration, and depression. It might also be that the RN students see the nursing faculty as the source of their role stress. Nursing faculty therefore are more aware of the RN

students' feelings during nursing courses than during the period when they are taking non-nursing courses.

It is also possible that the sample for this study was not large enough to cause the differences seen in the raw scores on the role strain variables to show a statistically significant difference between the RN students taking nursing courses and those taking non-nursing courses.

Only when the demographic variables were taken into consideration did a difference between the RN students taking nursing courses and those taking non-nursing courses emerge. And, it was only two of the demographic variables that resulted in this difference. When the time of day that the RN students took the course was considered, there was a significant difference, between the RN students taking nursing courses and those taking non-nursing courses, on at least one of the role strain variables. This difference was not found when the RN students taking nursing courses were divided into the two or three groups. The role strain variable that seemed to contribute to this difference was anxiety. It was the RN students taking nursing courses during the day who consistently had higher mean scores on the anxiety scale. None of these RN students were taking classes with basic, generic nursing students. The class make-up was an all RN student group. But, it might be that

taking the class during the day reminded them of previous experiences in educational settings and increased their anxiety level. It might also be that many of these RN students taking day nursing classes worked the evening shift and were affected by the anticipation of what they would be involved in at work that evening. Or, others might have left work to come to class and had to return to work at the end of class, as one RN student pointed out was the condition under which she was attending class. It would be difficult not to experience anxiety while absent from one's responsibilities. Still others might have been attending class while babysitters cared for their children, since their spouse would probably not be home during the day. Many of the RN students taking nursing courses related how hectic it was to meet family demands. Having to arrange for and trust the care of their children to babysitters would seem to be a possible source of anxiety. VanMeter and Agronow (1982) found that "dissatisfaction with child care was highly correlated with role strain."

The other demographic variable that made a difference between the RN students taking nursing courses and those taking non-nursing courses, on at least one of the role strain variables, was whether or not the RN student had the role of wife/husband. This difference was only found when the RN students taking nursing courses were divided into

three groups: those taking their first, second or third, and fourth nursing course. The role strain variables that seemed to contribute to this difference were anxiety and depression. It seems that this finding may not be valid though, because on examination of the means of the cross classification cells, only one subject, taking the fourth nursing course and not having the role of wife/husband, accounted for the most frequent, highest anxiety scale mean, and only two subjects, taking the second or third nursing course and not having the role of wife/husband, accounted for the most frequent, lowest depression scale mean. Also, in light of the responses to the open-ended questions and interview, this finding does not seem valid because there was much reference made by the RN students to the pressures and depression felt concerning the disruption of their family life.

In contrast to the lack of significant differences between the RN students taking nursing courses and those taking non-nursing courses on the role strain variables, there were significant differences evidenced between the four points in time during the term on the role strain variables by some groups of RN students. The group of RN students taking non-nursing courses and the groupings of RN students taking nursing courses considered as one group, RN students taking their first nursing clinical course, and RN

students taking their second or third nursing course did show a significant difference between the four points in time during the term on the role strain variables.

The variation across the four points in time on the role strain variables for the RN students taking non-nursing courses seems to follow a pattern related to the usual uncertainty about the beginning of a new course with the increased intensity of response at the end of the course as the deadline for the final exam and the due date of papers required for the course approaches. The univariate statistics seemed to indicate that all three role strain variables contributed to this pattern. The orthogonal polynomials revealed a cubic pattern for all three role strain variables with the addition of a linear pattern for hostility on the rise. The mean at time point one was also significantly greater than at time point four on the role strain variable anxiety. This pattern follows the usual sequence in a course and the times at which the questionnaires were filled out by the subjects.

The first questionnaire was filled out during the first week of the course. At this point the RN student would still be unsure about how the course would be structured and what kind of teacher the instructor would be. Many of the RN students related that they were anxious,

didn't know what to expect in the course, were apprehensive about the instructor, and were afraid of the competition of younger students.

The second questionnaire was filled out a third of the way through the course, which was before a mid-term exam would have been upon the RN students. By this time they would have gotten a "feel" for the course and instructor. Many mentioned that they became more relaxed as the course progressed.

The third questionnaire was filled out two-thirds of the way through the course. This was the pressure period of the course with course papers due and the final exam approaching. Many of the RN students noted that writing papers was difficult for them and that they were anxious before exams. By this time in the course they were also tired.

The fourth questionnaire was sent out during the last week of the course but was usually not filled out or returned until after the course had ended. At this point the pressure of the course was gone and the predominant feeling expressed by the RN students was that of relief. It does seem significant though that the role strain variable of hostility had a linear upward trend during the period when the RN students were taking non-nursing courses

because, hostility was the predominant, common stage/phase of the resocialization models for RN students returning for their BSN.

When all the RN students taking nursing courses were considered as one group, there again was a significant difference between the four points in time during the term on at least one of the role strain variables. This role strain variable seemed to be state anxiety. Not only was the univariate statistic for anxiety significant but the quadratic component of the orthogonal polynomials was significant for anxiety, as well as a decreasing linear component for anxiety. The mean at time point one was also significantly greater than at time point four on the role strain variable of anxiety. The levels of hostility and depression seemed to hold steady across all four time points with only the level of anxiety decreasing significantly at the end of the term. It may be that this lack of fluctuation across time in the role strain variables of hostility and depression indicates the development of Schein's first stage, unfreezing, proposed in his model of planned change. The highest level for anxiety was at time point three, as it had been for the RN students taking non-nursing courses. Again, this pattern for anxiety seems to be related to the end of term pressures of final exams and course papers due. Many of the RN students taking

nursing courses spoke of "the final and papers crunch," "nervousness about the final," and "feeling of pressure at the end."

With the RN students taking nursing courses divided into those that were taking their first nursing theory course and those that were taking their first nursing clinical course, only those taking their first nursing clinical course showed a significant difference between the four points in time during the term on at least one of the role strain variables. Again, as when all the RN students taking nursing courses were considered as one group, this role strain variable seemed to be state anxiety. The univariate statistic for anxiety was again significant as was the quadratic component of the orthogonal polynomials for anxiety. The cubic component of the orthogonal polynomials was also significant for anxiety but with a lower probability level. Again, the highest level for anxiety was at time point three. This finding, as before, seemed to be related to the end of term pressures of final exams and course papers.

Although the univariate statistic for the role strain variable depression had not been significant for a difference between the four points in time during the term for the RN students taking their first nursing clinical

course, the cubic component of the orthogonal polynomials was significant. There was a decrease in the mean on the depression scale at time point two in relation to time point one, a rise in the mean at time point three in relation to time point two, and a fall in the mean at time point four in relation to time point three. The highest level for depression was at time point three, as it had also been for anxiety. In all of the institutions, this course contained some skills in health assessment which many of the RN students saw as relevant to their nursing practice: "Glad to get to the `meat' of the program," "I thought it would be beneficial," "I was excited about the course because it would enhance my assessment skills that I use in practice," "This is an important course." This may have resulted in an initial lessening of their depression but these courses also had a laboratory component which meant more hours of their time, more papers to write, and more reading to do. Many related how "overwhelmed" and "down" they were with the "paper work." Others spoke of their disappointment with themselves because they couldn't put into the course what they wanted to. It may be that because they did see this course as having some relevance, they felt not only increased anxiety as the end of term pressures built, but also increased depression because they had let themselves down by not doing as well as they thought they should have.

Many of the resocialization models for RN students returning to school for their BSN noted a stage/phase of depression at some point before the final stage of role change. Hostility had no significant components for the orthogonal polynomials.

With the RN students taking nursing courses divided into those taking their first nursing course, those taking their second or third nursing course, and those taking their fourth nursing course, only those taking their second or third nursing course showed a significant difference between the four points in time during the term on the role strain variables. As was true for the RN students taking non-nursing courses, all three role strain variables seemed to contribute to the difference between the four points in time. With these RN students taking their second or third nursing course, not only did the orthogonal polynomials reveal a similar cubic pattern for all three role strain variables with the addition of a linear component for hostility, but the linear pattern for hostility for this group was a decreasing one. Also, the means at time point one for all three role strain variables were significantly greater than at time point four. For the RN students taking non-nursing courses only the mean for anxiety had been greater at time point one than at time point four. In addition, the quadratic component of the orthogonal

polynomials was also significant for all three role strain variables for the RN students taking their second or third nursing course. This component had a greater probability than the cubic component for the role strain variables anxiety and depression. The highest mean for the role strain variables anxiety and depression occurred at time point three. For hostility, the mean at time point three was as high as it was for time point one, but the standard deviation was less at time point three.

It may be that this pattern across time for the RN students taking their second or third nursing course reflects, as did the one for the RN students taking non-nursing courses, the usual uncertainty about the beginning of a new course with the increased intensity of response at the end of the course as the deadline for the final exam and the due date of papers required for the course approaches. But, since those RN students taking their first or fourth nursing course did not show a significant difference between the four points in time during the term on the role strain variables, one might suspect that this group of RN students is experiencing more upheaval than the other two groups taking nursing courses. This pattern of the role strain variables across time for the RN students taking their second or third nursing course might be indicative of the first phase of Schein's model of

planned change, unfreezing. The finding of a decreasing linear trend for hostility might indicate that they are approaching the end of this first phase.

There is the possibility that the RN students taking their fourth nursing course did not show a significant difference between the four points in time during the term on the role strain variables because the sample size for this grouping was too small. There were only seven subjects in this group. Although there was no significant difference between the four time points for this group, the quadratic component of the orthogonal polynomials was significant for state anxiety. The level of state anxiety at time point two was greater than at time point one and less at time points three and four than at time point two. The level of state anxiety at time point four was lower than at time point one, but not significantly lower. Almost all of the RN students in this group were taking a nursing course with a clinical component. This clinical component involved performance of health assessments on a client, which the instructor of the course supervised. This may have been threatening and anxiety provoking for the RN student, especially in the initial aspect of the course.

The lack of a significant difference between the four points in time during the term on the role strain variables

for the RN students taking their first nursing theory course might be related to the structure and purpose of this first course. The first nursing course that the RN student usually takes is a "bridge course." It is usually conducted as a low key, orientation to the department of nursing's philosophy, objectives, and conceptual framework and to those areas of nursing and nursing education that for the faculty differentiate the professional nurse from the technical nurse. Perhaps, since the RN students were glad to be finally getting into the nursing courses, they took a "wait and see attitude." Since it is usually a course to "ease them into the nursing major" it may have deliberately been planned and conducted to decrease stress on the RN student. The responses to the open-ended and interview questions revealed very little evidence of depression. While there were some responses on the part of some of the RN students that evidenced both anxiety and hostility, yet others did not. Perhaps some of those who entered the course with anxious and hostile feelings from prior periods of role strain continued to experience role stress from this course.

The fact that the findings for the RN students taking their first nursing course are the same as for those taking their first nursing theory course can be explained. Most of the RN students would be the same for both groupings since

the first nursing course that the RN student takes is usually theoretical in nature.

The implications of the findings on the role strain variables for these RN students seem to fall into four areas. The first relates to helping the RN student examine and clarify the reason for "going on to school" rather than "going back to school" or "returning to school." She needs help in understanding and viewing this decision in a positive perspective before beginning the program. The very phrase "going back to school" connotes repetition of a prior educational experience. Faculty members who counsel and advise RN students need to have it clear in their own minds why this step is "going on" and not "going back." The RN student must be helped to see the BSN program not just in relation to the nursing major but in relation to the overall goals of a college education - to become an educated person.

A second area relates to program planning. The RN student should be assisted to map out her entire program, see the length of time it will take to complete the BSN, and be willing to commit herself to that plan before she begins the program. The advisor should give realistic assistance in deciding on the course load and the responsibilities she will assume during a school term. Wilson and Levy (1978),

after looking at the reasons for attrition of RN students, also noted the need for the faculty to be honest about the program demands and objective in their counseling.

The third area seems to relate to study skills and time management principles. When the RN student begins courses many need several practical sessions in effective study habits, test taking, paper writing, and time management strategies. These measures would assist them in the resocialization into the student role that Sams (1977) noted they required (p. 40). This helps them decrease the "pressure" and "crunch" at the end of the term. These sessions should be offered at the beginning of the term on class days and evenings and be presented by personnel from the college study skills center. The information presented in these sessions should also be available in modular format for those who cannot attend.

The final area relates to the help the RN student will need in the life style change necessary in order to integrate this additional responsibility into her other activities with the least amount of stress. Wilson and Levy (1978) also noted the need for "pressure-releasing strategies" as a result of their study on the attrition of RN students. Interestingly, when the RN students in this study were asked during the structured telephone interview

if answering the questionnaires over the period of the term had any positive effect on them, the majority of both the RN students taking nursing courses and those taking non-nursing courses said, "Yes." They explained the positive effect by relating how answering the questionnaires made them get in touch with their feelings about certain situations and how they were reacting to them. Several went on to elaborate how this insight helped them change their behavior or attitude in relation to the situation. It was also pointed ourt by several that they usually didn't take the time to engage in this type of reflection.

It is evident from the findings of this study, that RN students taking non-nursing or nursing courses must be provided with assistance in change of their life style. Combined groups from both courses, lead by nursing faculty, would allow the two groups to help one another. Queen (1984), too, suggested the use of "open sessions for counseling, advising, or receiving grievances from the students." She also suggested the "use of peer counselors" - "upper level RN students nearing the completion of their program." This life style change assistance could help alleviate role strain not associated with role change.

Nursing Role Perspective Variables

The lack of significant difference between the RN students taking nursing courses and those taking non-nursing courses on the nursing role perspective variables was also unexpected. This lack of difference was not only across all four time points but, again, at each of the four points in time during the term. Even when the RN students taking nursing courses were divided into the two groups, based on whether they were taking their first nursing theory course or first nursing clinical course, and the three groups, based on whether they were taking their first, second or third, or fourth nursing course, the lack of significant differences persisted. This finding was unexpected for three reasons.

On the basis of the theoretical framework of this study, one would expect some role change to occur in the RN students taking nursing courses, at least by their fourth nursing course. It is the intent of the BSN program to resocialize entering RN students to the role of the professional nurse. This deliberate resocialization process begins when the RN student takes the nursing courses. At this time she comes under the influence of the nursing faculty, engaging in planned change as Schein conceptualizes it (1972, p. 75).

The second reason that this finding of no significant difference was unexpected is that the review of literature on the RN student affirms that it does occur, both in the descriptions of the stages/phases in the resocialization of the RN student (Balogh et al., 1980; Brainard, 1983; Higgins & Wolfarth, 1980; Shane, 1980; Woolley, 1978) and the research done on RN students (Blicharz, 1985; Hillsmith, 1978; Hogan, 1972; Hunter, 1985; Notter & Robey, 1979, p. 126; Smullen, 1982, 1983; Soefje, 1985; Wilson, Vaughan, & Gaff,1977). Wilson, Vaughan, and Gaff (1977) found the acquisition of new professional roles after the first year of the program. Only Holzemer, Anderson, Weiss, and Slichter (1983) did not find a change in attitudes of professionalism, from the time of entrance to the time of graduation, for RN students pursuing the BSN.

The third reason is that the responses to the open-ended questions and interview suggested that there should be a difference. Only seven of the RN students taking non-nursing courses indicated or said they saw any change in their perspective on the role of the nurse over the term, and three of these said that the change was not related to the course they were taking but to situations at work. The four RN students who did say they saw a change in their perspective were taking the following courses: Pathophysiology, Medical Ethics, Art Appreciation, and

Introduction to Counseling Psychology. The RN student taking Introduction to Counseling Psychology said she gradually became more aware of the psychological factors of the patient related to his illness. The RN student taking Art Appreciation said the course helped her to be more perceptive and sensitive to people and aware of how they look at things. The RN student taking Medical Ethics said she saw the physician as less "god like." It made her realize that nurses must be more assertive, in less direct ways, to get things done in nursing so the situation would be better for both the patient and nurse. The fourth RN student was taking Pathophysiology. She said that about two-thirds of the way through the course she felt more confident in discussing lab values and the pathophysiology of the patient's problem with the physician on an equal basis.

In contrast to the RN students taking non-nursing courses, 26 of those taking nursing courses indicated that they did see a change in their perspective on the role of the nurse over the term. Seven said they saw no change. More of the RN students who saw no change were taking a nursing course with a clinical component. It must be pointed out that this clinical component was very limited and its major goal was the development of the health assessment skills of the nurse. Most of those who indicated

a point at which a change occurred said it was near the end of the course. Most of the change was in relation to an awareness of an expanded scope of nursing, an expanded role of the nurse, and a broader perspective on nursing. Other areas of change in decreasing order were seeing the nurse as: a more independent practitioner, a problem solver, having the need to be a professional, having increased responsibility as her skills increased, having an increased responsibility for teaching, having a greater role in prevention of illness, using the concept of caring, and having a health assessment and screening role.

The explanation for the apparent incongruence between the findings of the nursing role perspective scales and the responses of the RN students to the open-ended questions and interview may lie in one of several possible situations. In the interview the RN students were interacting with the investigator. Students taking nursing courses may have associated the investigator with the teacher role and given the answers s(he) felt the investigator wanted to hear. Also, although the students were assured that none of the faculty from their program would know if they were participating in the study or be informed of any of their responses, they may have been hesitant to answer in a way other than that they knew would be acceptable to their instructors. Smullen (1983, pp. 501-508) in her study,

notes the power of the teacher and the efforts of the RN students to please the teacher. The RN students may have found it less threatening to respond as they really felt to the objective, forced choice type questions in the nursing role perspective scales.

Another possibility is that change in nursing role perspective of these RN students taking nursing courses was insufficient to be reflected in the nursing role perspective scales that were used in this study. Most of the RN students taking nursing courses were near the beginning of their courses sequence. This could have resulted in a lack of significant difference between the RN students taking nursing courses and those taking non-nursing courses. Another possible factor, in lack of significant change in these RN students taking nursing courses, is the evidence of the role strain they were experiencing. This role strain may have hindered them from paying attention to the new nursing role perspective presented to them.

It is also possible that the sample size was too small to yield a significant difference between the groups. With the RN students taking nursing courses divided into three groups, there were only seven RN students taking their fourth nursing course and eight taking their second or third nursing course. Even with the RN students taking nursing

courses divided into two groups, there were only 14 RN students taking their first nursing theory course and 19 taking their first nursing clinical course. The differences between the means for the groups on the nursing role perspective variables were small and they may only have been significant with a much larger sample size.

There is also the possibility that the scales used to measure the nursing role perspective variables do not reflect current professional values and therefore could not reflect the changes that were occurring in these RN students. Minehan (1977) felt that "the beliefs upon which nurse role conceptions are based have shifted." Her remark was in reference to Corwin's Nursing Role Conception Scale upon which the Bureaucratic, Service, and Professional scales used in this study are based. Corwin's scale was developed in 1961. The Opinions About Nursing scale, which contains the Bureaucratic, Service, and Professional scales used in this study, was adapted from Corwin's scale and used in 1979. The Nursing Orientation Toward Care or Cure scale was developed in 1973 and used in 1975 and 1977.

Finally, it is possible that the nursing role perspective scales did not have sufficient reliability and validity to reflect changes in the RN students taking nursing courses or significant differences between the RN

students taking nursing courses and those taking non-nursing courses. The Nursing Orientation Toward Care or Cure scale does not have extensive data on its reliability and validity. It is purported to have content validity, but the data for construct validity contains some contradictions (Bullough & Sparks, 1975, 1977; Ward & Fetler, 1979, p. 384). The alpha reliability coefficient reported of .62 is based on only one group of subjects with an N of 1349 (Ward & Fetler, 1979, p. 384). The Opinions About Nursing scale has no reported validity or reliability data. There is rather extensive data on the validity and reliability for Corwin's Nursing Role Conception Scale. The Opinions About Nursing scale is a modification of this measure (Ward & Fetler, 1979, p. 414). Kramer in 1966 also provided data that established its construct validity (Minehan, 1977). But, Minehan's study (1977) cast some doubt about the validity and reliability of the Corwin Nursing Role Conception Scale for present contemporary professional values.

Even when the demographic variables and the role strain variables were taken into consideration, there was no significant difference between the RN students taking nursing courses and those taking non-nursing courses. This finding persisted even when the RN students taking nursing courses were divided into the two groups, based on whether

they were taking their first theory or first clinical nursing course, and the three groups, based on whether they were taking their first, second or third, or fourth nursing course.

In contrast to the significant differences between the four points in time during the term on the role strain variables, for some of the groups of RN students, no significant differences between the four points in time during the term were found for any of the groupings. One would not expect to see changes from time point to time point for the RN students taking non-nursing courses since there was no deliberate effort by faculty to focus on nursing role perspective change. Also, as pointed out earlier, no research was found on RN students that would corroborate this finding.

There was a significant difference between time point one and time point four on the care/cure scale for the RN students taking non-nursing courses. The mean score at time point four was greater than at time point one. Also, the linear component of the orthogonal polynomials was significant for the care/cure scale for the RN students taking non-nursing courses. It is difficult to explain this trend. No comparable research was found, and based on role change theory, one would not expect it to occur since no

deliberate efforts were taken to initiate its appearance. One can only speculate that this trend in perspective towards being more care oriented was also occurring unconsciously in many more of the RN students taking non-nursing courses. The list of RN students' non-nursing courses (see Appendix B, I and II) reveals that the majority of them were closely related to those taken by students who identified a change in their nursing role perspective.

Perhaps the reason, that the RN students taking nursing courses did not show a significant difference between the time points on the nursing role perspective variables, is that time between points was insufficient to reflect a significant difference in change between time points. The RN student enrolled in a ten week nursing course was tested after three weeks. In a 15 week term, the interval between time points was about three and one-half weeks. One RN student remarked, "One course isn't going to change my perspective. I've been a nurse for 17 years." Studies using similar subjects have used at the most two points, the beginning and ending usually covering a two year period.

The differences of the means on the nursing role perspective variables from time point to time point were small. As was pointed out earlier, the limited number of

subjects in each of the groupings in the nursing courses may have been too small for the differences to be significant.

Although none of the groupings of the RN students taking nursing courses showed a significant difference in the means on the care/cure scale from time point one to time point four, the quadratic component of the orthogonal polynomials, for the care/cure scale, for the RN students taking their first nursing theory course, was significant. The quadratic component was also significant for the RN students taking their first nursing course. As pointed out earlier, the RN students in these two groupings were essentially the same RN students. The means on the care/cure scale for both these groups dropped from the initial level and then rose again at the end of the term. Students first became less and then more care oriented. None of the other components of the orthogonal polynomials for any other nursing role perspective variables were significant for these two groups. This scale is constructed on the assumption that task or work preferences in nursing can be used to measure "two basic orientations to the nursing role: one focused on caring for patients and the other on curing their illness" (Ward & Fetler, 1979, p. 383). Perhaps as these RN students progressed through this introductory course they were at first resistant, but then became more willing to change some of their task or work

preferences as a result of the content of the course.

The mean scores between time point one and time point four on the Bureaucratic scale, for the RN students taking their fourth nursing course, were significantly different. The mean score at time point four was higher than at time point one. Also, the quadratic component of the orthogonal polynomials, for the Bureaucratic scale, for the RN students taking their fourth nursing course, was significant. These RN students became more bureaucratic in their role conception and then less bureaucratic at the end of the term. Although the level did not fall to that at the beginning of the term, it did remain high enough to be significantly different from it. Almost all of the RN students in this group were taking a nursing course with a clinical component. This clinical component involved minimal client contact and that which did occur was directed to health assessment. The client contact took place in one of several settings: hospital, nursing home, or senior citizen's retirement village. In these settings the instructor of the course supervised the RN student's performance of health assessment on the client. This may have been threatening. Two students specifically observed that the clinical component of the course made them feel like beginning nursing students again. This threatening position may have influenced the students to shift their

loyalty to the safe, organized system within which they usually functioned and where they had more control. Although Blicharz (1985) used cohort subjects, she found no difference on the Bureaucratic scale between RN students taking their first, middle, or last nursing course in the BSN program (p. 163).

For the groupings of all the RN students taking nursing courses considered as one group and those taking their second or third nursing course considered as one group, the linear component of the orthogonal polynomials, for the Service scale, was significant. This trend was of increasing service role conception. Those RN students taking their second or third nursing course made up 24% of all the RN students taking nursing courses. "The service role conception reflects loyalty to the patient and to either humanitarian or religious principles or to both" (Notter & Robery, 1979, p. 141). Corwin and Taves (1962) found that nursing students in both Diploma and BSN programs had higher service role conceptions than staff nurses who were graduates of the corresponding programs. This trend toward increasing service role conception may have been a result of the student experience itself. Many of the concepts emphasized in the nursing courses would encourage the RN students increased loyalty to the patient. They would also possibly reactivate some of the idealism in

"service to mankind" that they had felt in the basic nursing program experience. Most of the RN students taking their second or third nursing course were taking a nursing course with a clinical component and were attending the same educational institution. Their elderly clients were living in a nursing home or senior citizens' housing. These factors might have activated their humanitarian values.

The implications of the findings on the nursing role perspective variables for these RN students seem to fall into three areas. The first area relates to helping more of the RN students see the implications for their nursing practice in the non-nursing courses which they are taking. With the help of nursing faculty, in unstructured sessions, the RN students taking nursing courses could give those taking non-nursing courses valuable insights into the future application of their courses.

Another area relates to a secondary purpose for assisting the RN students, as previously suggested, in the life style changes that will be necessitated to integrate "going to school" into her other activities with the least amount of stress. On the basis of role change theory and the lack of the finding of significant differences between the RN students taking nursing courses and those taking non-nursing courses, it would seem that the reduction of

role stress, from factors other than those associated with role change, would enhance the development of Schein's (1972, pp. 75-79) first phase of planned change, unfreezing. If the RN student does not undergo unfreezing, she will not be able to pay attention to the new nursing role perspective that is presented.

The final area of implications relates to the RN student - nursing faculty relationship in nursing courses containing a clinical component. It is within this relationship that the motivation to change is created. The RN student's present beliefs, attitudes, values, or behavior patterns that do not conform to the characteristics of the professional nurse, are disconfirmed to facilitate the unfreezing stage of Schein's model of planned change. It must be these factors that are disconfirmed and not the RN students themselves. Nursing faculty, working with RN students, need assistance in how to interact with RN students in the clinical area to facilitate the planned change process and not frustrate it by introducing role stress, in addition to that of the unfreezing stage. The RN student also needs clear explanations as to the purpose of direct clinical supervision. Not only should explanations be given before the experience occurs but sufficient time should be planned for an open student discussion of their reactions to and fears of faculty observation.

Recommendations

The following recommendations are made as an outcome of this study:

1. RN students need better preparatory counseling on their motivations for pursuing the BSN and assistance with realistic planning concerning their academic load in relation to their other responsibilities. They also need continued support during the program to assist them with study skills, time management skills, and life style changes for stress reduction.

2. The RN students who participated in this study should be asked to extend their period of participation so that the present study could be extended to follow them until at least one year post graduation.

3. The present study should be replicated with the following modifications:

    1. The same RN students need to be followed from non-nursing courses through the final nursing courses of the BSN program.

    2. Data on role strain variables and nursing role

perspective variables should be collected over many more time points but not as closely together as in this study.

3. Different objective scales with more current validity and reliability data should be used to collect the data on nursing role perspective variables to ensure that change will be reflected if it is present.

4. The open-ended questions as a part of the questionnaire should be retained, as well as the telephone interview, to provide a source of qualitative data, but the questions used in the open-ended questions should make a more deliberate attempt to relate the feeling about the course being taken to the nursing role perspective of the subject. A person other than the principle investigator should conduct the telephone interviews.

5. A group of RNs not enrolled in a BSN program or any degree granting program should be used as control subjects.

6. A larger sample of RN students should be followed for the period of time from non-nursing courses to the completion of the nursing courses to insure that if changes are present, as a result of the BSN program, they will be detected.

SUMMARY

At present there are three educational routes one can take to become a Registered Nurse (RN): The hospital Diploma program, the junior college ADN program, and the college or university BSN program. Graduates from all three programs take the same licensing examination and are granted the same legal title.

A recent trend in nursing education is a decrease in the number of Diploma graduates and an increase in the number of ADN and BSN graduates. Another trend is the return of Diploma and ADN graduates to school to pursue the BSN. This career move is often accompanied by protest and feelings of devaluation. This trend, the return of Diploma and ADN graduates to school to pursue the BSN, is the result of the efforts of the American Nurses's Association to establish the BSN as the entry level preparation for professional nursing. It is also the result of the pressure exerted by employers in response to scociety's demand for health care by professionals. Nurses are required to upgrade to a professional level traditionally associated with university education.

The underlying assumption, of this return of technically trained Diploma and ADN graduates to school to earn the BSN, is that this process will resocialize them to a professional nursing role perspective. Some nursing educators have questioned if this resocialization indeed can or does occur. If it does not occur, neither society, the nursing profession, nor the technically trained RN has benefited.

This study sought to determine if the technically trained RNs who return to school to obtain the BSN change their perspective on the role of the nurse from a technical one to a professional one. It also sought to establish if role strain were present during this period, which would be indicative of role change. Germane to this study, was the emotional cost to the RN students of this educational experience.

Over the past 20 years the nursing literature has been in agreement on the differentiating characteristics of the technical and professional nurse. The only major area that lacks agreement is whether or not the technical nursing role is a foundation for the professional nursing role. The differentiating characteristics of the technical and professional nursing role seem to fall into five categories: knowledge base, problem-solving/decision-making process,

nursing problems identified and solved, scope of practice, and attitudes toward practice.

The research literature on the differentiating characteristics of the technical and professional nurse is not as clear cut as the descriptive literature. There are some conflicting findings in comparable areas but in general there are more areas of differences than likenesses found between the technical and professional nurse. There seems to emerge as a distinguishing feature of the professional nurse, as contrasted to the technical nurse, a breadth of perspective both cognitively and in practice.

The theoretical basis for this study was role theory. The RN who returns to school to pursue the BSN is already functioning in and perceives herself as fulfilling the nurse role. Her present nurse role is the result of initial socialization during her basic nursing program and a resocialization into the nurse role in a work setting after. It is the intent of the faculty of the BSN program to again resocialize her, to yet another role; that of professional nurse.

This resocialization process was viewed as planned change. Schein's model was utilized to conceptualize this experience of resocialization. The first stage of the model

"unfreezing," should create role stress for the RN student. Role stress results in role strain with its subjective distress felt as frustration, tension, anxiety, apathy, or futility. The outcome of role stress is motivation to change. In Schein's second stage, changing, the RN student should use the new information presented to alter her way of viewing her role. In Schein's reefreezing stage, role change should occur as the RN student integrates her new beliefs, values, and behavior patterns into her total person. With this integration, the goal of the educational process for the RN who has returned to school to earn the BSN will have been accomplished as she now views her role as a nurse from a professional perspective and no longer from a technical perspective.

The descriptive literature on the experiences of RNs who return to school covered retrospective accounts by individuals and groups of RN students and faculty who had taught RN students. The accounts by the RN students identified an initial negative response to their educational experience followed by a final positive response in which they realized that they viewed nursing in a different way. The faculty also reported an initial phase with strong emotional feelings followed by a final phase, change in the RN student's view of and/or practice of nursing.

The research literature revealed a diversity of subjects and data collection tools. It confirmed that when the subjects were either the same or cohort RN students on entry and exit, there were changes that indicated a move toward professionalism. Even when the subjects were RN students with only one year of the BSN nursing courses completed, there was found evidence of a new professional role. When the subjects were graduating RN/BSN and generic BSN students, there was no difference found in stress level or professionalism. Only one of the studies used a concurrent approach to data collection. None of the studies attempted to document the stages/phasesd that RN students experience during the BSN program. But it does seems from these studies that the RN/BSN programs for RNs educated in technical programs have been successful in their goals and objectives.

Descriptions and studies on the resocialization of the physician to psychiatrist were also reviewed because this experience seems analogous to what the RN student experiences. The stages/phases identified in this area of resocialization seem not unlike those described for the RN student.

The subjects in this study were 97 RN students enrolled in eight different BSN programs in the greater

Chicago area. One group of 47 RN students were taking non-nursing courses and another group of 50 RN students were taking nursing courses. All of the subjects were female except for two males in the nursing course group. The subjects in both groups were similar on the demographic variables except that a typical RN student taking non-nursing courses was enrolled in a basic generic BSN program which admitted RN students, a Diploma graduate, and not a parent; whereas, a typical RN student taking nursing courses was enrolled in a BSN program for RNs only, an ADN graduate, and a parent. The subjects voluntarily consented to participate after receiving a verbal and/or written explanation of the study.

Three methods were used to collect data for this study in addition to the Demographic Data questionnaire: objective scales, open-ended questions, and a telephone interview. The objective scales of the State Form of the State-Trait Anxiety Inventory, the Hostility Inventory, and the Short Multiscore Depression Inventory were used to gather information on the presence of role strain. The objective scales of the Nursing Orientation Toward Care or Cure and the Bureaucratic, Service, and Professional scales of the Opinions About Nursing were used to gather information on the evidence of resocialization in the subjects. The same

scales and the open-ended questions were administered to the subjects at each of four points in time during one academic term: during the first week of the term, one-third of the way through the term, two-thirds of the way through the term, and during the last week of the term. The telephone interview was conducted after the return of the fourth set of scales and open-ended questions. Complete data were gathered on 65 subjects: 31 RN students taking non-nursing courses and 34 RN students taking nursing courses.

The research design of the study was a quasi-experimental, discrete time series design. The subjects taking non-nursing courses served as the control group and those taking nursing courses as the experimental group. The independent variables were the taking of a nursing course and the four points in time. The dependent variables were the objective scales, the two open-ended questions, and the telephone interview. No other variables were controlled but the demographic variables were accounted-for.

The major statistical analysis applied to the data of this study was the multivariate repeated measures analysis of variance. To determine trends over the four time points, for each of the dependent variables, for each group, orthogonal polynomials were fit to each dependent variable.

The data for the RN students were analyzed with the RN students considered in two groups: RN students taking non-nursing courses and those taking nursing courses; three groups: RN students taking non-nursing courses, those taking their first nursing theory course, and those taking their first nursing clinical course; and four groups: RN students taking non-nursing courses, those taking their first nursing course, those taking their second or third nursing course, and those taking their fourth nursing course. The results of the data analysis revealed that there was no significant difference between the two, three, or four groupings of RN students, across the four points in time, or at each of the points in time, on the mean scores of the role strain variables or the nursing role perspective variables. Only when the demographic variables were considered was there a difference revealed between the RN students taking nursing courses and those taking non-nursing courses, on the role strain variables. Those RN students taking day nursing courses appeared to evidence the most state anxiety. But when the demographic variables and the role strain variables were considered, there was no significant difference between the RN students taking nursing courses and those taking non-nursing courses, on the mean scores of the nursing role perspective variables, for the two, three, or four groupings

of the RN students.

For the RN students taking non-nursing courses, RN students taking nursing courses considered as one group, RN students taking their first nursing clinical course as a part of the three groups of RN students, RN students taking their second or third nursing course as a part of the four groups of RN students, there was a significant difference, across the four points in time during the term, on the role strain variables. For the RN students taking nursing courses and those taking their first nursing clinical course, only state anxiety seemed to contribute to this difference, but for those taking non-nursing courses and those taking their second or third nursing course, all three role strain variables seemed to contribute to this difference. In contrast, there was no significant difference, across the four points in time, on the nursing role perspective variables, for any of the groupings of the RN students taking nursing or non-nursing courses, within the two, three, or four groups.

For the RN students taking non-nursing courses, RN students taking nursing courses considered as one group, and RN students taking their second or third nursing course as a part of the four groups of RN students, there was a significant decrease in state anxiety between time point one

and time point four. For the RN students taking their second or third nursing course there was also a significant decrease in hostility and depression between time point one and time point four. For RN students taking non-nursing courses there was a significant increase in care perspective between time point one and time point four. For RN students taking their fourth nursing course there was a significant increase in bureaucratic perspective between time point one and time point four.

There were some significant trends, across the four points in time, for the role strain and nursing role perspective variables, for some of the groups of the RN students. For those RN students taking non-nursing courses, there was a linear trend for hostility and care/cure perspective and a cubic trend for state anxiety, hostility, and depression. For all the RN students taking nursing courses considered as one group, there was a linear trend for state anxiety and service perspective and a quadratic trend for state anxiety. For the RN students taking their first nursing theory course, there were no significant trends for the role strain variables, but a quadratic trend for the care/cure perspective. For the RN students taking their first clinical nursing course, there was a quadratic trend for state anxiety and a cubic trend for state anxiety

and depression, but no significant trends for the nursing role perspective variables. For the RN students taking their first nursing course, there were no significant trends for the role strain variables, but a quadratic trend for the care/cure perspective. For the RN students taking their second or third nursing course, there was a linear trend for hostility and the service perspective; a quadratic trend for state anxiety, hostility, and depression; and a cubic trend for state anxiety, hostility, and depression. For the RN students taking their fourth nursing course, there was a quadratic trend for state anxiety and the bureaucratic perspective.

The lack of differences in role strain between the RN students taking non-nursing courses and those taking nursing courses seemed to be related to the experiencing of similar sources of role stress by both groups of RN students. Those areas of role stress were: ambivalence or duress as the condition under which they were attending school, disruption in their established life patterns by going to school, demands and requirements of the course(s) to which their self-expectations could not rise, heavy course loads, and perception that the course was a waste of their time. Other possible explanations, for the finding of a lack of difference between these two groups in role strain, were:

use of retrospective approaches by others interested in this topic, lack of investigation of role strain in RN students taking non-nursing courses by other studies, and small sample size of this study. Consideration of only one demographic variable seemed to result in a significant difference on the role strain variables between the RN students taking non-nursing courses and those taking nursing courses: time of day the RN students took courses. The RN students taking nursing courses during the day may have felt more anxiety for several reasons: the day time placement of the course may have reminded them of previous educational experiences, anticipation of an evening work situation, and situations they may have left to come to the class during the day.

The significant difference evidenced between the four points in time during the term, on the role strain variables, by the RN students taking non-nursing courses, those taking nursing courses considered as one group, and those taking their first nursing clinical course, seemed to follow a pattern related to the usual uncertainty about the beginning of a new course with the increased intensity of response at the end of the course. The significant cubic component of the orthogonal polynomial, for the depression scale, for the RN students taking their first clinical

nursing course, may have been related to their feeling that they had let themselves down by not doing well in a course they felt had relevance for their work situation. The significant difference between the four points in time on the role strain variables for the RN students taking their second or third nursing course, in view of the fact that the RN students taking their first or fourth nursing course did not show a significant difference between the four points in time on the role strain variables, seemed to indicate that this group was experiencing more upheaval than the other two groups and may have been an indication of their being in Schein's first stage of planned change, unfreezing.

Several implications seemed to follow from the findings and interpretations of the data related to the role strain variables. These implications were in four areas: helping the RN student clarify the reasons for "going on to school," realistic program planning, assistance in effective study skills, and assistance in necessary life style changes to accommodate the additional student role.

Although there was no significant difference between the RN students taking non-nursing courses and those taking nursing courses, on the nursing role perspective variables, across time or at each of the four time points, the answers to the open-ended questions and the interview questions

seemed to indicate that the RN students taking nursing courses did have a change in their nursing role perspective. This apparent incongruence may be explained by one of several situations: associating the investigator with the teacher role and answering the questions as they felt would be teacher-acceptable; having less than complete confidence that their responses would not get back to their teachers, they answered them in a way that would be acceptable to them; the change in nursing role perspective was too small to be reflected in the scales used to measure nursing role perspective; the role strain they were experiencing hindered them from paying attention to the new nursing role perspective presented to them during the course; small sample size of this study; and insufficient validity and reliability of the nursing role perspective scales used to reflect current professional values. Consideration of the demographic variables and the role strain variables did not result in a significant difference between the RN students taking non-nursing courses and those taking nursing courses on the nursing role perspective variables.

The lack of a significant difference, between time points on the nursing role perspective variables, for the RN students taking nursing courses, might have been due to

insufficient time between points, to reflect a significant difference, in change in nursing role perspective. The small sample size may also have contributed to the lack of a significant difference. The significant quadratic component of the orthogonal polynomials, for the care/cure scale, for the RN students taking their first nursing course and those taking their first nursing theory course, may have resulted from these students, as they progressed through this introductory course, becoming more willing to change some of their task or work preferences. The significant increase between time point one and time point four and the significant quadratic component of the orthogonal polynomials, for the Bureaucratic scale, for the RN students taking their fourth nursing course, may have resulted from the threatening situation in this course, "being supervised in the clinical area by the nurse faculty member." As a result, these students may have shifted their loyalty to the safe, organized system within which they usually functioned and where they had more control. The reactivation of prior student idealism in "service to mankind" and the elderly clients they were having contact with, may explain the significant linear component of the orthogonal polynomials, for the Service scale, for the RN students taking their second or third nursing course and all the RN students taking nursing courses considered as one group.

The significant increase between time point one and time point four and the significant linear component of the orthogonal polynomials, on the care/cure scale, for the RN students taking non-nursing courses, was speculated to be due to an unconscious effect, of the general education and supporting courses, of increasing their sensitivity to the person as a whole.

The implications drawn from the interpretations of the findings on the nursing role perspective variables were that: RN students taking non-nursing courses need assistance in seeing the value of these courses to their nursing practice; RN students need help in reducing role stress from factors other than those associated with role change; and faculty working with RN students in the clinical area need assistance with facilitating the planned change process.

Three recommendations dealt with the following areas, as an outcome of this study: better counseling for the RN student with reference to motivation for pursuing the BSN, realistic program planning, study skills, time management skills, and life style changes; extension of the present study to one year post graduation of the subjects; replication of the present study with modifications.

REFERENCES

Aero, R., & Weiner, E. (1981). The mind test. New York: Morrow Quill Paperbacks.

Aisenstein, T. J. (1985). The BSN dispute will destroy nursing! RN, 48(12), 49-50.

American Nurses' Association. (1981). Facts about nursing 80-81. New York: American Nurses' Association.

American Nurses' Association. (1985). Facts about nursing 84-85. Kansas City, MO: American Nurses' Association.

American Nurses' Association Commission on Nursing Education. (1979). A case for baccalaureate preparation in nursing (Publication No. NE-6 15M 12/79). Kansas City, Missouri: American Nurses' Association.

An RN returns to school. (1982). Chicago Nurse, 34, 3.

Archer, M. L. B. (1976). Establishing equivalency for nurses seeking admission to graduate nursing programs. Dissertation Abstracts International, 37(5), 2161-B. (University Microfilms No. 76-25, 139)

Baj, P. A. (1983). Role conflict, role ambiguity, and anxiety among registered nurses and generic students in baccalaureate nursing programs. Dissertation Abstracts International, 44(10), 3038-B. (University Microfilms No. DA8401301)

Baj, P. A. (1983). Stress of the returning R. N. student. In W. L. Holzemer (Ed.), Review of research in nursing education (pp. 92-106). Thorofare, New Jersey: Slack Incorporated

Balogh, E., Chasan, P., Devito, J., Dolloff, J., Flynn, J., Frazier, B., Okraska, C., Pemberton, J., Polito, M., Portnoy, F. L., Turell, A., Walker, A., & Wyer, W. (1980). RN students analyze their experiences. Nursing Outlook, 28, 112-115.

Bardossi, K. (1980). Why BSN programs drive nurses crazy. RN, 43(2), 53-55.

Bartholomew, A. B. (1983). The 1985 Proposal: From a negative to a positive viewpoint and why. Occupational Health Nursing, 31(5), 26-30.

Berndt, D. J. (1981). How valid are the subscales of the multiscore depression inventory? Journal of Clinical Psychology, 37(3), 564-570.

Berndt, D. J. (1983). Manual for the multiscore depression inventory. Unpublished manuscript.

Berndt, D. J., Petzed, T. P., & Kaiser, C. F. (1983). Evaluation of a short form of the multiscore depression inventory. Journal of Consulting and Clinical Psychology, 51(5), 790-791.

Berry, C. E., & Drummond, E. J. (1970). The place of the humanities in nursing education. Nursing Outlook, 18(9), 30-31.

Bevis, M. E. (1973). Role conception and the continuing learning activities of neophyte collegiate nurses. Nursing Research, 22(3), 207-216.

Blicharz, M. E. (1985). Nursing role conception of registered nurses returning to school for a bachelors degree in nursing (Doctoral dissertation, Rutgers, The State University of New Jersey, 1985). Dissertation Abstracts International, 46(9), 3003-B.

Boyle, R. E. (1980). Planning and implementation of a baccalaureate program for registered nurse students. In Baccalaureate nursing education for registered nurses: Issues and approaches (Pub. No. 15-1812)(pp. 33-43), New York: National League for Nursing.

Brainard, N. S. (1983). From RN to BSN. American Journal of Nursing, 83, 490.

Bray, J. H., & Maxwell, S. E. (1985). Multivariate analysis of variance. Beverly Hills: Sage Publications.

Brodt, D. E. (1969). College bound - But why. Nursing Outlook, 17(1), 48-49.

BSN completion: What's working for RNs in Illinois. (1986). Chart, 83(1), 6-7.

Bullough, B., & Sparks, C. (1975). Baccalaureate vs associate degree nurses: The care-cure dichotomy. Nursing Outlook, 23(11), 688-692.

Bullough, B. (1979). The associate degree: Beginning or end? Nursing Outlook, 27(5), 324-328.

Buss, A. H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting and Clinical Psychology, 21(4), 343-349.

Byrnes, F. C. (1966). Role shock: An occupational hazard of American technical assistants abroad. The Annals of the American Academy of Political and Social Science, 362(11), 95-108.

Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Chicago: Rand McNally College Publishing Company.

Christy, T. E. (1980). Entry into practice: A recurring issue in nursing history. American Journal of Nursing, 80, 485-488.

Cole, E. (1985). Assessment reveals it's time for us to change. The American Nurse, 17(10), 4, 18.

Conway, M. E. (1974). Management effectiveness and the role making process. Journal of Nursing Administration, 4(6), 25-28.

Conway, M E. (1978). Theoretical approaches to the study of roles. In M. E. Hardy & M.E. Conway, Role theory: Perspectives for health professionals (pp. 17-27). New York: Appleton-Century-Crofts.

Cook, T. D., & Campbell, D. T. (1979). Quasi-Experimental design & analysis issues for field settings. Boston: Houghton Mifflin Company.

Corona, D. F. (1973). College education tailor-made for registered nurses. American Journal of Nursing, 73, 294-297.

Corwin, R. G. (1960). Role conception and mobility aspiration: A study in the formation and transformation of bureaucratic, professional and humanitarian nursing. Dissertation Abstracts International, 21(5), 1280. (University Microfilms No. 60-3505)

Corwin, R. G. (1961a). Role conception and career aspiration: A study of identity in nursing. The Sociological Quarterly, 2(20), 69-86.

Corwin, R. G. (1961b). The professional employee: A study of conflict in nursing roles. The American Journal of Sociology, 66(6), 604-615.

Corwin, R. G., & Taves, M. J. (1962). Some concomitants of bureaucratic and professional conceptions of the nurse role. Nursing Research, 11(4), 223-227.

Dustan, L. C. Assessment and planning for registered nurses entering baccalaureate nursing education. In Baccalaureate nursing education for registered nurses: Issues and approaches. (Pub. No. 15-1812)(pp. 27-31), New York: National League for Nursing.

Entry into practice. (1985). Chicago Nurse, 37(1), 1-2.

Epstein, R. B. (1976). Theory and process of change. In Coping with change through assessment and evaluation (Pub. N. 23-1618)(pp. 1-12). New York: National League for Nursing.

Epstein, R. B., & Friesner, A. (1977). Caution! This baccalaureate may be hazardous to your health. American Journal of Nursing, 77, 470-472.

Evans, F. M. C. (1971). Psychosocial nursing. New York: The Macmillan Company.

Fielding, N. G., & Fielding, J. L. (1986). Linking data. Beverly Hills, California: Sage Publications, Inc.

First men students admitted to school of nursing in 1886. (1986, October). The American Nurse. p. 16.

Frederickson, K., & Mayer, G. G. (1977). Problem solving skills: What effect does education have?, American Journal of Nursing, 77, 1167-1169.

Freed, L. A., & Searight, M. W. (1980). The Sonoma model: One pathway for registered nurses seeking baccalaureate education. In Baccalaureate nursing education for registered nurses: Issues and approaches (Pub. No. 15-1812)(pp. 51-63). New York: National League for Nursing.

Glick, M. S. (1985). Educational entry level into nursing practice. The Journal of Continuing Education in Nursing, 16(6), 185-188.

Goldstein, J. O. (1980). Comparison of graduating AD and baccalaureate nursing students' characteristics. Nursing Research, 29, 46-48.

Goode, W. J. (1960). A theory of role strain. American Sociological Review, 25, 483-496.

Goodwin, L. S. (1984). Increasing efficiency and precision of data analysis: Multivariate vs univariate statistical techniques. Nursing Research, 33(4), 247-249.

Gortner, S. R. (1968). Nursing majors in twelve western universities: A comparison of registered nurse students and basic senior students. Nursing Research, 17(2), 121-128.

Gray, F. I. (1980). Socialization of the RN in baccalaureate nursing education. In Baccalaureate nursing education for registered nurses: Issues and approaches (Pub. No. 15-1812)(pp. 11-19)). New York: National League for Nursing.

Griffin, S. (1985). LPNs see associate degree as key to their survival. The American Nurse, 17(10), 5, 16.

Gullahorn, J. T. (1956). Measuring role conflict. American Journal of Sociology, 41, 299-302.

Hale, S. L., & Boyd, B. T. (1981). Accommodating RN students in baccalaureate nursing programs. Nursing Outlook, 29, 535-540.

Hardy, M. E. (1978). Role stress and role strain. In M. E. Hardy & M.E. Conway, Role theory: Perspectives for health professionals (pp. 73-109). New York: Appleton-Century-Crofts.

Harsanyi, B., Metzger, M., & Popiel, E. S. (1980). Setting the stage. The Journal of Continuing Education in Nursing, 11(6), 6-10.

Hartwig, M. S. (1972). Role and identity: Important distinction. Nursing Outlook, 20(10), 665-669.

Higgins, P. G., & Wolfarth, K. M. (1981). Reality shock in reverse. American Journal of Nursing, 81, 2062-2063.

Hillsmith, K. E. (1978). From RN to BSN: Student perceptions. Nursing Outlook, 26, 98-102.

Hinshaw, A. S. (1977). Socialization and resocialization of nurses for professional nursing practice. In Socialization and resocialization of nurses for professional nursing practice (Pub. No. 15-1659)(pp. 1-15). New York: National League for Nursing.

Hiraki, A., & Parlocha, P. K. (1983). Returning to school: The RN to BSN handbook. Boston: Little, Brown and Company.

Hogan, C. A. (1972). Registered nurses' completion of a bachelor of science degree in nursing - Its effect on their attitude toward the nursing profession. Dissertation Abstracts International, 33(3), 1170-B. (University Microfilms No. 72-23, 953)

Hogle, E. L. (1982). Phases in the resocialization of the technical registered nurse to the professional registered nurse. Unpublished manuscript.

Holzemer, W. L., Anderson, M., Weiss, S., & Slichter, M. (1983). An assessment of the Benner Proficiency Scale as a measure of professionalization of the baccalaureate nurse. Unpublished manuscript.

House, C. (1973). College education tailor-made for me. American Journal of Nursing, 73, 297-298.

Hover, J. (1975). Diploma vs degree nurses: Are they alike. Nursing Outlook, 23, 684-687.

Hunter, E. P. (1985). Role conceptions of baccalaureate level two-plus-two nursing students (Doctoral dissertation, George Peabody College for Teachers of Vanderbilt University, 1985). Dissertation Abstracts International, 46(10), 2938-A.

Hurley, B. A. (1978). Socialization for roles. In M. E. Hardy & M. E. Conway, Role theory: Perspectives for health professionals(pp. 29-72). New York: Appleton-Century-Crofts.

Illinois RNs seek compromise on scope of practice. (1986). American Journal of Nursing, 86, 77, 84, 90.

Ipock, B. D. (1982). Anger in the returning RN student: A descriptive survey. Dissertation Abstracts International, 43(10), 3186-A. (University Microfilms No. 83-04, 866)

Johnson, D. E. (1966). Competence in practice: Technical and professional. Nursing Outlook, 14(10), 30-33.

Johnston, S C. (1982). The use of the Rines Model in differentiating professional and technical nursing practice. Nursing & Health Care, 3, 374-379.

Joint Commission on Accreditation of Hospitals. (1985). Accreditation manual for hospitals. Chicago: Joint Commission on Accreditation of Hospitals.

Kelman, H. C. (1961). Process of opinion change. Public Opinion Quarterly, 25(1), 57-78.

Kerlinger, F. N. (1973). Foundations of behavioral research (2nd ed.). New York: Holt, Rinehart and Winston.

Ketefian, S. (1981). Moral reasoning and moral behavior among selected groups of practicing nurses. Nursing Research, 30(3), 171-176.

Kibrick, A. (1968). Why collegiate programs for nurses? The New England Journal of Medicine, 278(14), 765-771.

Kinder, J. S. (1985). Charting nursing's future. Nursing & Health Care, 6(12), 519.

King, I. M. (1981). A theory for nursing: Systems, concepts, process. New York: John Wiley & Sons.

Kinney, C. K. D. (1985). A reexamination of nursing role conceptions. Nursing Research, 34(3), 170-176.

Kirk, R. E. (1968). Experimental design: Procedures for the behavioral sciences. Belmont, California: Brooks/Cole Publishing Company.

Klagsbrun, S. C. (1967). In search of an identity. Archives of General Psychiatry, 16(3), 286-289.

Kohnke, M. F. (1973). Do nursing educators practice what is preached? American Journal of Nursing, 73, 1571-1575.

Kramer, M. (1974). Reality shock. Saint Louis: The C. V. Mosby Company.

Kramer, M. (1981). Philosophical foundations of baccalaureate nursing education. Nursing Outlook, 29, 224-228.

Kuntz, B. (1978). Returning to school. Supervisor Nurse, 9(2), 15-17.

Leddy, S. (1976). Open curriculum and the curriculum process. In Accountability and the open curriculum in baccalaureate nursing education(pp. 9-20). New York: National League for Nursing.

Leddy, S. (1982). Personality changes associated with baccalaureate education for registered nurses. Journal of Nursing Education, 21(8), 45-46.

Lee, A. (1979). Why feelings run high on the professional/technical split. RN, 42(3), 52-58.

Lenburg, C. B. (1980). In search of the BSN: How to decide which program does you justice. RN, 43(2), 60-63.

Lenburg, C., & Johnson, W. (1974). Career mobility through nursing education: A report on NLN's open curriculum project. Nursing Outlook, 22, 265-269.

Le Tourneau, L. J. (1980). Want a BSN? Try and get it! RN, 43(1), 75-80.

Lewis, E. P. (1973). Editorial: Identity crisis. Nursing Outlook, 21(10), 633.

Lewis, E. P. (1977). The baccalaureate degree. Nursing Outlook, 25, 369.

Lewis, K. M. (1973). Back to school. American Journal of Nursing, 73, 676-677.

Light, D. (1979). Surface data and deep structure: Observing the organization of professional training. Administrative Science Quarterly, 24, 551-559.

Linden, G. (1985). Why I changed my stand on the BSN. RN, 48(8), 57.

Little, M., & Brian, S. (1982). The challengers, interactors and mainstreamers: Second step education and nursing roles. Nursing Research, 31(4), 239-245.

Loomis, M. E. (1974). Collegiate nursing education: An ambivalent professionalism. The Journal of Nursing Education, 13(11), 39-48.

Lum, J. L. J. (1978). Reference groups and professional socialization. In M. E. Hardy & M.E. Conway, Role theory: Perspectives for health professionals (pp. 17-27). New York: Appleton-Century-Crofts.

Lynaugh, J. (1980). The "Entry into practice" conflict: How we got where we are and what will happen next. American Journal of Nursing, 80, 266-270.

Malasanos, L. (1977). The educator and nursing role acquisition. In Socialization and resocialization of nurses for professional nursing practice (Pub. No. 15-1659) (pp. 19-21). New York: National League for Nursing.

Malkemes, L. C. (1974). Resocialization: A model for nurse practitioner preparation. Nursing Outlook, 22, 90-94.

Maurin, J. (1983). Role: A look at role theory and role change. In D. L. Shane Returning to school: A guide for nurses(pp. 53-67). Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

McCarty, P. (1985). SNAs seek ways to put title, degree requirements into system. The American Nurse, 17(8), 1, 13, 15.

Merklin, L., & Little, R. B. (1967). Beginning psychiatry training syndrome. American Journal of Psychiatry, 124(2), 97-101.

Metzger, B. L., & Schultz, S. (1982). Time Series Analysis: An alternative for nursing. Nursing Research, 31(6), 375-378.

Michelmore, E. (1977). Distinguishing between AD and BS education. Nursing Outlook, 25(8), 506-510.

Minehan, P. L. (1977). Nurse role conception. Nursing Research, 26(5), 374-379.

Minkler, M., & Biller, R. P. (1979). Role shock: A tool for conceptualizing stresses accompanying disruptive role transitions. Human Relations, 32(2), 125-140.

Montag, M. (1980). Looking back: Associate degree education in perspective. Nursing Outlook, 28(4), 248-250.

Mooneyhan, E. L. (1983). The demise of a baccalaureate program for registered nurses: Lessons learned. Nursing & Health Care, 4(4), 192-197.

Moore, M. A. (1969). The professional practice of nursing: The knowledge and how it is used. Nursing Forum, 8(4), 361-373.

Morandi, J. (1983). Effectiveness of the proposed BSN as definitive of professionalism in motivating non-degreed nurses to pursue the degree. Unpublished manuscript.

Murray, L. M., & Morris, D. R. (1982). Professional autonomy among senior nursing students in diploma, associate degree, and baccalaureate nursing programs. Nursing Research, 31(5), 311-313.

Musio, L. G., & Ohashi, J. P. (1979). The RN student - Unique characteristics, unique needs. Nursing Outlook, 27, 528-532.

National League for Nursing. (1979). Characteristics of baccalaureate education in nursing. New York: National League for Nursing.

Naisbitt, J. (1982). Megatrends: Ten new directions transforming our lives. New York: Warner Books, Inc.

National League for Nursing data book (Pub. No. 19-1915). (1983). New York: National League for Nursing.

NLN adopts motion supporting 2 levels of nursing practice. (1985). The American Nurse, 17(10), 3, 9.

NLN switches position, backs 2 entry levels. (1986). American Journal of Nursing, 86, 78, 82.

Norris, C. G. (1980). Characteristics of the adult learner and some observations on extended higher education. In Baccalaureate nursing education for registered nurses: Issues and approaches (Pub. No. 15-1812)(pp. 1-10). New York: National League for Nursing.

Norusis, M. J. (1985). SPSS-X advanced statistics guide. New York: McGraw-Hill Book Company.

Notter, L. E., & Robey, M. (1979). The open curriculum in nursing education: Final report of the NLN open curriculum study(Pub. No. 19-1799). New York: National League for Nursing.

Owen, L. J. (1984). Identification of factors associated with negative feelings registered nurses experience during a resocialization process in baccalaureate nursing education. Dissertation Abstracts International, 44, 2944-A.

Pasnau, R. O., & Bayley, S. J. (1971). Personality changes in the first year of psychiatric residency training. American Journal of Psychiatry, 128(1), 79-84.

Pieta, B. A. (1977).A comparison of role conceptions among nursing students and faculty from associate degree, baccalaureate degree, and diploma nursing programs and head nurses (Doctoral dissertation, State University of New York at Albany, 1976). Dissertation Abstracts International, 37(11), 5604-B. (University Microfilms No. 77-10, 688)

Queen, P. S. (1984). Resocializing the degree-seeking RN: A curriculum thread. Journal of Nursing Education, 23(8), 351-353.

Reed, F. C. (1979). Education or exploitation? American Journal of Nursing, 79, 1259-1261.

Reed, S. B. (1984). Commentary on models of basic nursing education. Nursing & Health Care, 5, 263-267.

Richards, M. A. B. (1972). A study of differences in psychological characteristics of students graduating from three types of basic nursing programs. Nursing Research, 21, 258-261.

Sam, L. (1977). Factors that affect the socialization and resocialization of nurses for professional practice. In Socialization and resocialization of nurses for professional nursing practice (Pub. No. 15-1659)(pp. 35-41). New York: National League for Nursing.

Sargis, N. M. (1983). Upper-Division or completion programs for R. N.s. In N. L. Chaska (Ed.), The nursing profession: A time to speak (pp.111-120). New York: McGraw-Hill Book Company.

Schaurer, M. (1980). Nursing educators, give us a break! RN, 43(7), 69.

Schein, E. H. (1972). Professional education: Some new directions. New York: McGraw-Hill Book Company.

Schmiedel, E. G. (1973). One rung at a time - Up the career ladder. Nursing Outlook, 21, 400-403.

Segal, E. T. (1985). Is nursing a profession: Yes or no. Nursing 85, 15(6), 41-43.

Selby, T. L. (1985). House votes `Associate' as second title. The American Nurse, 17(8), 1, 16.

Selby, T. L. (1986). North Dakota adopts rules, SNAs push for BSN. The American Nurse, 18(2), 1, 16.

Shane, D. L. (1980). The returning-to-school syndrome. In S. K. Mirin (Ed.), Teaching tomorrow's nurse: A nurse educator reader (pp.119-126). Wakefield, Massachusetts: Nursing Resources, Inc.

Shaw, M. E., & Costanzo, P. R. (1970). Theories of social psychology. New York: McGraw-Hill Book Company.

Simpson, I. H. (1967). Patterns of socialization into professions: The case of student nurses]. Sociological Inquiry, 37(Winter), 47-54.

Smullen, B. B. (1982). Second-step education for R.N.s: The quiet revolution. Nursing & Health Care, 3, 369-373.

Smullen, B. L. (1983). Role change and the R. N. student: A process described Dissertation Abstracts International, 44(5), 1414-B. (University Microfilms No. 83-21, 715)

Soefje, L. T. (1985). Differences in selected aspects of professionalism between registered nurse students entering and those exiting baccalaureate degree programs in nursing (Doctoral dissertation, Texas A & M University, 1985). Dissertation Abstracts International, 46(5), 1208-A.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). STAI manual for the state-trait anxiety inventory ("Self-evaluation questionnaire"). Palo Alto, California; Consulting Psychologists Press, Inc.

SPSS Inc. (1983). SPSS^{x} user's guide. New York: McGraw-Hill Book Company.

Staff. (1985). 15,000 RNs LPN's hear INA's entry proposal. Chart, 82(7), pp. 1, 11.

Stevens, B. J. (1985). Does the 1985 nursing education proposal make economic sense? Nursing Outlook, 33(3), 124-127.

Strauss, A. (1962). Transformations of identity. In A. M. Rose (Ed.), Human behavior and social processes: An interactionist approach. Boston: Houghton Mifflin Company.

Sullivan, E. (1984). The registered nurse baccalaureate student: Differences at entry; Differences at exit. Journal of Nursing Education, 23(7), 302-303.

The Illinois nursing act. (1980). Springfield, Illinois: State of Illinois, Department of Registration and Education.

Thomas, L. S. (1965). Is nursing service administration prepared for the professional nurse. Journal of Nursing Education, 4(1), 5-7.

VanMeter, M. (1985). Ducking the debate over BSNs. RN, 48(8), 74.

VanMeter, M. J. S., & Agronow, S. J. (1982). The stress of multiple roles: The case for role strain among married college women. Family Relations, 31(January), 131-138.

Verhonick, P. J., Nichols, G. A., Glor, B. A. K., & McCarthy, R. T. (1968). I came, I saw, I responded: Nursing observation and action survey. Nursing Research, 17(1), 38-44.

Wallace, T. (1984). Patients - not degrees - are the heart of nursing. RN, 47(2), 63-64.

Ward, M. J., & Fetler, M. E. (1979). Instruments for use in nursing education research. Boulder, Colorado: Western Interstate Commission for Higher Education.

Waters, V. H., Chater, S. S., Vivier, M. L., Urrea, J. H., & Wilson, H. S. (1972). Technical and professional nursing: An exploratory study. Nursing Research, 21, 124-131.

Watson, A. B. (1982). Professional socialization of the registered nurse as measured by attitudes and problem identification skills (Doctoral dissertation, University of California, San Francisco, 1982). Dissertation Abstracts International, 43(10), 3190-B.

Watson, A. B. (1983). Professional socialization of the registered nurse. In W. L. Holzemer (Ed.), Review of research in nursing education (pp. 34-59). Thorofare, New Jersey: Slack Inc.

Wilson, H. S., & Levy, J. (1978). Why RN students drop out. Nursing Outlook, 26, 437-441.

Wilson, H. S., Vaughan, H. C., & Gaff, J. G. (1977). The second step model of baccalaureate education for registered nurses: The student's perspective. Journal of Nursing Education, 16, 27-35.

Wood, J. H. (1982). RN-BSN education: Helping RNs make tough decisions. Nurse Educator, 7(1), 37-38.

Woolley, A. S. (1978). From RN to BSN: Faculty perception. Nursing Outlook, 26, 103-108.

Woolley, A. S. (1984). The bridge course: Transition to professional practice. Nurse Educator, 9(4), 15-19.

Worby, C. M. (1970). The first-year psychiatric resident and the professional identity crisis. Mental Hygiene, 54, 374-377.

Zusy, M. L. (1986). RN to BSN: Fitting the pieces together. American Journal of Nursing, 86, 394-397.

APPENDIX A

DESCRIPTION OF INSTITUTIONS

I. Where Subjects Were Taking Non-Nursing Courses

Institution #9:

An independent, liberal arts college founded in 1871. It became a four year college in 1924. It is affiliated with the United Church of Christ. The student enrollment in the Day Session is nearly 2000 and in the Evening Session and other continuing education programs about 1500 are served. The BSN program is accredited by the National League for Nursing and admits both basic generic and RN students. This institution is located in one of the western Chicago suburbs and occupies 35 acres. The semesters of its academic calendar are 15 weeks in length.

Institution #10:

A christian, liberal arts college founded in 1891. It is affiliated with the Evangelical Covenant Church. The student enrollment is just under 1200. The BSN program is accredited by the National League for Nursing and admits both basic generic and RN students. The institution is located in a northern residential neighborhood of Chicago and occupies 30 acres. The terms of the academic calendar are 10 weeks in length.

II. Where Subjects Were Taking Nursing Courses

Institution #1:

A Roman Catholic, liberal arts college founded in 1887 by the Benedictine monks of St. Procopuis Abbey. The student enrollment is just over 2300. The BSN program is an upper-division program for RNs only. At the time of this study it had not yet obtained accreditation by the National League for Nursing. The institution is located in a southwest suburb of Chicago on an 108-acre campus. The semesters of the academic calendar are 15 weeks in length.

Institution #2:

A state, upper-division, commuter university founded in 1969. The student enrollment is 5500. The BSN program is an upper-division program for RNs only. It is accredited by the National League for Nursing. The institution is located in a southern suburb of Chicago on a 750-acre campus. The trimesters of the academic year are 15 1/2 weeks in length.

Institution #3:

A state land grant university established in 1946. The university enrolls 25000 students. The BSN program is accredited by the National League for Nursing and admits both basic generic and RN students. The institution is located about one mile from Chicago's Loop on 170 acres. The quarters of the academic calendar are 10 weeks in length.

Institution #5:

An independent liberal arts college founded in 1893 by the Advent Christian Church. It maintains an association with the denomination. The student enrollment is 1600. The BSN program is accredited by the National League for Nursing and admits both basic generic and RN students. The institution is located 45 miles west of Chicago on a 26-acre campus. The terms of the academic calendar are 11 weeks in length.

Institution #6:

Same institution as #9.

Institution #7:

A private, liberal arts college founded in 1890 as a training institute for YMCA leaders. It educates for careers of humanitarian responsibility. The student enrollment is 1115. The BSN program is open only to RNs. At the time of this study it had not yet obtained accreditation by the National League for Nursing. The institution is located in a western suburb of Chicago on a 200-acre campus. The quarters of the academic calendar are 10 weeks in length.

Institutions #4, #8, and #11:

No subjects from these institutions.

Institution #12:

A Catholic, liberal arts college founded in 1847 by the Sisters of Mercy. The college enrolls 2300 students in its day, evening, and weekend courses. The BSN program is accredited by the National League for Nursing and admits both basic generic and RN students. The institution is located on the southwest side of Chicago on a spacious campus. The semesters of the academic calendar are 15 weeks in length.

APPENDIX B

COURSES SUBJECTS WERE TAKING

I. Number of Subjects for Each Type of Non-Nursing Course in Institution #9 [1]

1 General Psychology
1 Experimental Psychology
4 Introduction to Clinical Psychology
1 Child Psychology
2 Adolescent Psychology
1 Adult Psychology
1 Social Psychology
1 The Novel (literature)
1 The Poem
2 Literary Masterpieces
3 Composition
1 Communication Theory
5 Chemistry
1 Bacteriology
5 Pathophysiology
2 Tests and Measurements
5 Statistics
3 Finite Math
5 Theology
1 Philosophy
3 Art Appreciation
1 History of Modern Art
1 Sculpture
5 Physical Education

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1. Some subjects were taking more than one course

II. Number of Subjects for Each Type of Non-Nursing Course in Institution #10 [2]

1 Microbiology
2 Statistics
1 German
1 English Literature
1 Survey of Exceptional Children
3 Anthropology
3 Religion
1 Ethics

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2. Some subjects were taking more than one course

III. Description of Nursing Courses

Institution #1: First Nursing Course with a Clinical Component

A course designed to assist the student in synthesizing prior knowledge from the humanities, the natural and social sciences with the new skills of performing a health assessment. Clinical experience within varied settings will provide the opportunity to apply theory, clinical skills of health assessment, and the nursing process in the care of clients. Students assignments will require assessment of the client's total health status: biological, psychological, sociological, and cultural needs; physical examination utilizing instrumentation. Based upon the health assessment, the student will arrive at nursing diagnoses and plan nursing intervention.

Institution #2: First Nursing Course with a Clinical Component

This course is designed to develop skill in the physical, social, and psychological assessment of clients. Students will acquire both theoretical and technical background in examination and diagnosis. Faculty supervised on-campus laboratory practice is done weekly using models and students in the course as subjects. There is an off-campus clinical component in selected health care settings where validation of skills on well clients is done under faculty supervision.

Institution #3: First Nursing Course with a Theoretical Component
The purpose of this course is to facilitate the Registered Nurse's continued socialization in the professional nursing role and transition into baccalaureate nursing education. Current issues and trends in nursing will be examined in relation to historical events, trends, and the future of nursing. Emphasis is placed upon the concepts of professionalism, accountability, autonomy, and collaboration in relation to baccalaureate preparation for the professional nurse's role. Attention is given to selected social, economic, political, and legal forces influencing the historical development of contemporary nursing and impacting upon nursing's future.

Institution #5: First Nursing Course, Includes Both Theoretical and Clinical Components
Varying models and theoretical approaches to health, health care delivery, and nursing science are explored and critically evaluated as a means of meeting the needs of a changing society. The complimentary relationship of nursing science to other sciences, the liberal arts, and health disciplines is examined. Modes of investigation, inquiry and hypothesizing necessary for verifying and evaluating nursing intervention are explored, along with ethical aspects of nursing practice. Concurrent course: This course provides clinical practice in physical, psychosocial, cultural and spiritual assessment of individuals, along with community assessment. Emphasis is placed upon the client's perspective as one who may require care in several dimensions according to his level of wellness, his uniqueness and his capacities.

Institution #6: First Nursing Course with a Theoretical Component
Overview of nursing and nursing education with emphasis on nursing theories, current trends and issues in nursing, and role conflict.

Institution #6: First Nursing Course with a Clinical Component
The participant will learn the basic skills of history taking and physical assessment through theory content, class discussion, audiovisuals, and supervised practice. Emphasis is placed on the mastery of the skills necessary for and utilized in a complete physical assessment, including inspection, palpation, percussion, and auscultation.

Institution #12: First Nursing Course with a Theoretical Component
A seminar course designed to facilitate professional role development and socialization, clarification of personal values, and ethical perspectives. The seminar provides an opportunity to identify historical forces and professional issues related to nursing history, leadership, standards of practice, professional organization and nursing research leading to an understanding of the development of nursing as a profession and the role of the nurse in the health care delivery system.

Institution #7: First Nursing Course with a Theoretical Component

The first core nursing course for the RN completion student. This is a 4 quarter hour seminar course designed to acquaint the student with concepts related to professional nursing. Topics are related to NLN expectations of: orientation to legal/ethical nursing issues; role identification as an accountable, responsible practitioner; familiarity with nursing theory; utilization of the nursing process, and performance expectations as a professional. This course incorporates general education theories related to general systems theory, transactional communication skills, role formation, and goals of scientific knowledge. Co-requisite Course: A 4 quarter hour foundation course assigned to be taken tandem to above course. It defines the specific components of the nursing process: assessment, analysis, plan,. implementation, and evaluation. The definition of the nursing process is then related to a specific nurse theorist, Dorothea Orem, and her concepts of self care. Self care is the basis of this college's focus of nursing practice. Students are introduced to the self care theory to meet client needs on all levels of the health-illness continuum. RN students utilize a specific self care format, or care plan, in order to identify and organize a client's needs, design a plan based on his deficits, implement their plan to fulfill the need deficit, and evaluate the effectiveness of their client centered care. Hence, if the client's needs were not met, what revisions must be instituted to meet those needs. The RN student is introduced to client simulations in the form of case studies which stress man as having specific biological, psychological, and social needs. The design of the 4 major clinical components are based on the foundations of care planning emphasized in this course.

APPENDIX C

MOTIVATORS TO RETURN TO SCHOOL

I. Number and Percentage of Subjects by Type of Course for Fourth Strongest Motivator to Return to School

Motivators	Subjects: Non-Nursing Course	Subjects: Nursing Course
To increase knowledge, understanding, and self-development	2 (4.3%)	3 (6%)
To advance with the profession	5 (10.6%)	8 (16%)
To comply with the future entry into practice requirement	5 (10.6%)	3 (6%)
To get a better paying job	9 (19.1%)	8 (16%)
To get more prestige	4 (8.5%)	3 (6%)
To develop a habit of continued self-education	10 (21.3%)	2 (4%)
To get a job with more individual responsibility	1 (2.1%)	3 (6%)
To participate in nursing research		
To get a job with more convenient hours	2 (4.3%)	5 (10%)
To increase opportunity for close contact with patients	1 (2.1%)	1 (2%)
Other reasons		
None specified	8 (17%)	14 (28%)

II. Number and Percentage of Subjects by Type of Course for Fifth Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	4 (8.5%)	4 (8%)
To advance with the profession	2 (4.3%)	3 (6%)
To comply with the future entry into practice requirement	3 (6.4%)	2 (4%)
To get a better paying job	1 (2.1%)	8 (16%)
To get more prestige	6 (12.8%)	
To develop a habit of continued self-education	1 (2.1%)	2 (4%)
To get a job with more individual responsibility	9 (19.1%)	3 (6%)
To participate in nursing research	1 (2.1%)	
To get a job with more convenient hours	2 (4.3%)	4 (8%)
To increase opportunity for close contact with patients		2 (4%)
Other reasons	1 (2.1%)	
None specified	17 (36.2%)	22 (44%)

III. Number and Percentage of Subjects by Type of Course for Sixth Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	1 (2.1%)	3 (6%)
To advance with the profession	1 (2.1%)	1 (2%)
To comply with the future entry into practice requirement		2 (4%)
To get a better paying job	6 (12.8%)	1 (2%)
To get more prestige	3 (6.4%)	5 (10%)
To develop a habit of continued self-education	1 (2.1%)	3 (6%)
To get a job with more individual responsibility	3 (6.4%)	3 (6%)
To participate in nursing research	2 (4.3%)	3 (6%)
To get a job with more convenient hours		2 (4%)
To increase opportunity for close contact with patients	1 (2.1%)	2 (4%)
Other reasons	1 (2.1%)	
None specified	28 (59.6%)	25 (50%)

IV. Number and Percentage of Subjects by Type of Course for Seventh Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development	1 (2.1%)	
To advance with the profession		
To comply with the future entry into practice requirement	2 (4.3%)	3 (6%)
To get a better paying job		1 (2%)
To get more prestige	1 (2.1%)	3 (6%)
To develop a habit of continued self-education		3 (6%)
To get a job with more individual responsibility	1 (2.1%)	2 (4%)
To participate in nursing research	2 (4.3%)	2 (4%)
To get a job with more convenient hours	5 (10.6%)	1 (2%)
To increase opportunity for close contact with patients	1 (2.1%)	3 (6%)
Other reasons		
None specified	34 (72.3%)	32 (64%)

V. Number and Percentage of Subjects by Type of Course for Eighth Strongest Motivator to Return to School

Motivators	Subjects Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development		
To advance with the profession	1 (2.1%)	
To comply with the future entry into practice requirement		
To get a better paying job		
To get more prestige	2 (4.3%)	3 (6%)
To develop a habit of continued self-education		1 (2%)
To get a job with more individual responsibility	2 (4.3%)	1 (2%)
To participate in nursing research	2 (4.3%)	2 (4%)
To get a job with more convenient hours		4 (8%)
To increase opportunity for close contact with patients	2 (4.3%)	3 (6%)
Other reasons		
None specified	38 (80.9%)	36 (72%)

VI. Number and Percentage of Subjects by Type of Course for Ninth Strongest Motivator to Return to School

Motivators	Subjects	
	Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development		
To advance with the profession		
To comply with the future entry into practice requirement		
To get a better paying job	1 (2.1%)	2 (4%)
To get more prestige	1 (2.1%)	1 (2%)
To develop a habit of continued self-education	2 (4.3%)	2 (4%)
To get a job with more individual responsibility		
To participate in nursing research	2 (4.3%)	3 (6%)
To get a job with more convenient hours		4 (8%)
To increase opportunity for close contact with patients	2 (4.3%)	1 (2%)
Other reasons		
None specified	39 (83%)	37 (74%)

VII. Number and Percentage of Subjects by Type of Course for Tenth Strongest Motivator to Return to School

Motivators	Subjects	
	Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development		
To advance with the profession	1 (2.1%)	
To comply with the future entry into practice requirement	2 (4.3%)	2 (4%)
To get a better paying job		1 (2%)
To get more prestige		4 (8%)
To develop a habit of continued self-education		
To get a job with more individual responsibility		1 (2%)
To participate in nursing research	2 (4.3%)	1 (2%)
To get a job with more convenient hours	1 (2.1%)	
To increase opportunity for close contact with patients	1 (2.1%)	2 (4%)
Other reasons	1 (2.1%)	
None specified	39 (83%)	39 (78%)

VIII. Number and Percentage of Subjects by Type of Course for Eleventh Strongest Motivator to Return to School

Motivators	Subjects	
	Non-Nursing Course	Nursing Course
To increase knowledge, understanding, and self-development		
To advance with the profession		
To comply with the future entry into practice requirement		
To get a better paying job		
To get more prestige		
To develop a habit of continued self-education		
To get a job with more individual responsibility		
To participate in nursing research		1 (2%)
To get a job with more convenient hours		
To increase opportunity for close contact with patients		
Other reasons		
None specified	49 (98%)	47 (100%)

IX. Other Motivators to Return to School, With Their Ranking, by Subjects Taking Non-Nursing Courses and Those Taking Nursing Courses

Motivators

Non-nursing courses

1st -
If not advance within the profession possibly enter another field with a higher degree.

To stop being "put down" by the BSNs I work with.

When my husband died, I had a considerable loss of income and I realized I needed more income.

To see if I could still do it at this tender age. All others listed above are equally secondary reasons: or very close. (age 48 years)

5th -
Better benefits.

6th -
Always wanted to do.

10th -
Individual expectations.

Ranking not indicated -
I believe it will be a necessary advantage in the future and our hospital reimburses it's foolish to deny oneself further education for free.

To retire as soon as possible from work and the option to go back if ever I want to.

IX. Other Motivators to Return to School, With Their Ranking, by Subjects Taking Non-Nursing Courses and Those Taking Nursing Courses(continued)

Motivators
Nursing Courses
1st - To give myself crdedibility in my presant position - so I can have BSN after my name with articles I publish.
To specialize in my field of interest - cardiology.
Qualify for med school - requires BA.
To avoid go back into hospital nursing.
2nd - To get degree so can pursue graduate studies.
3rd - To meet requirements for promotion.
Ranking not indicated - My reasons for returning to school are not the same as my reasons for continuing school.
Taking no courses
Ranking not indicated - I like to study.

APPENDIX D

MATERIALS

I. Letter to RN Students

Dear RN Student:

Your name was provided to me by _____ of _____University. I commend you on your persistence in pursuing your BSN. I know that it takes persistence since I spent six years getting my BSN after returning to school (I am a diploma graduate in nursing). As RN/BSN students our experiences are certainly different than those of generic BSN students. I have taught both generic and RN/BSN students and have some insight into the important aspects of each of their experiences.

At present I am a doctoral student at Loyola University. It is these experiences of RN students that I have chosen to study for my dissertation. Having been through the process myself, I wanted to look at it more closely and see what others were experiencing as they moved through their program. I will be looking at RN students at different points in their program.

I would like to ask you to share with me your experiences through the end of this term. I would ask you to fill out a background information questionnaire initially and then respond to a set of questions, most of which will be true/false type of questions, at four different points in time from now through the end of this term. These questions will attempt to determine your feelings about and reactions to your educational experience and your preferences for and opinions about nursing situations. At the end of this term I would like to arrange a short interview with you.

Of course none of the materials you would share with me would be accessible to your instructors and none of your instructors would know who was participating in my study. You would in no way be identified in any material written as a result of the study. All of your responses would be held in the strictest of confidence and your name would not appear on future questionnaires (a code number would be used).

Although for purposes of inclusion in my study it is essential that I have a complete set of responses over time of a particular RN student, you would be free to withdraw from the study at any time.

At the conclusion of the study, at your request, I would be glad to provide you a summary of my study.

If you would be willing to help me look more closely at our experiences of being RN students in a BSN program, please sign the enclosed Agreement to Participate and fill out the Demographic Data Questionnaire and return them to me in the enclosed stamped, self addressed envelope. You will receive your first set of questions by return mail.

Thank you for your consideration of a topic of interest to both of us and best wishes to you in the completion of your BSN.

Sincerely,

Edith Hogle

II. Agreement to Participate

Project Title: Experiences of RN Students

I,_____, state that I am over 18 years of age and that I wish to participate in a program of research being conducted by Edith Hogle.

I understand that I will be asked to respond to questionnaires at four different points in time from now until the end of this academic term. I also understand that I will be interviewed at the end of this term.

None of my instructors will be informed that I am participating in this study. My name will not be used in the written report of this study. All information that I provide will be held in the strictest confidence.

I understand that my participation in this study is completely voluntary and that I may withdraw at any time.

Upon my request, a summary of the completed study will be provided for me.

Please print your name

Please sign your name

Please print your mailing address

Please write your home telephone number

Date signed

Your code number____-_____-__-__

III. Demographic Data Form for Subjects Taking Non-Nursing Courses

(Code No.____-_____-__-__)

DEMOGRAPHIC DATA

1. What prompted you to return to school for your BSN? (Indicate your strongest reason as #1, next strongest as #2, and so on for as many reasons as were a factor in your return to school.)

___to get more prestige
___to participate in nursing research
___to get a better paying job
___to increase knowledge, understanding and self-development
___to comply with the future entry into practice requirement(ANA's 1985 Proposal)
___to develop a habit of continued self-education
___to advance with the profession
___to get a job with more convenient hours
___to get a job with more individual responsibility
___to increase opportunities for close contact with patients
___(indicate other reasons not listed)

2. What was your nursing position before you started back to school? (Give title of position and clinical area)

3. What is your present nursing position? (Give title of position and clinical area)

4. How much support and encouragement do you get from your family, friends, and work peers in returning to school? (1-none, 2-a little, 3-pretty much, 4-a lot)

___Family
___Friends
___Work peers

5. What is your student status?

___Full time
___Part time

6. What other responsibilities or roles do you have besides that of going to school? (Check all that apply to you)

___Full time work
___Part time work
___Wife
___Mother (How many children? _____
Their ages_____)
___Roommate
___Ongoing relationship with particular significant other
___(indicate others not listed)

7. How much has your life style changed since you started back to school? (check one)

___Not at all
___A little
___Somewhat
___Quite a bit
___Drastically

8. What year did you graduate from your basic nursing program?

9. How many years have you worked in nursing since you graduated?

10. What type of program was your basic nursing program?

___Diploma
___Associate Degree

11. What is your age?

12. How many CEU's have you earned in the last year?

13. What nursing courses have you taken, or are you taking, in this program?

14. What course(s) are you taking this term?

IV. Demographic Data Form for Subjects Taking Nursing Courses

(Code No.____-_____-__-__)

DEMOGRAPHIC DATA

1. What prompted you to return to school for your BSN? (Indicate your strongest reason as #1, next strongest as #2, and so on for as many reasons as were a factor in your return to school.)

___to get more prestige
___to participate in nursing research
___to get a better paying job
___to increase knowledge, understanding and self-development
___to comply with the future entry into practice requirement(ANA's 1985 Proposal)
___to develop a habit of continued self-education
___to advance with the profession
___to get a job with more convenient hours
___to get a job with more individual responsibility
___to increase opportunities for close contact with patients
___(indicate other reasons not listed)

2. What was your nursing position before you started back to school? (Give title of position and clinical area)

3. What is your present nursing position? (Give title of position and clinical area)

4. How much support and encouragement do you get from your family, friends, and work peers in returning to school? (1-none, 2-a little, 3-pretty much, 4-a lot)

___Family
___Friends
___Work peers

5. What is your student status?

___Full time
___Part time

6. What other responsibilities or roles do you have besides that of going to school? (Check all that apply to you)

___Full time work
___Part time work
___Wife
___Mother (How many children? _____
Their ages_____)
___Roommate
___Ongoing relationship with particular significant other
___(indicate others not listed)

7. How much has your life style changed since you started back to school? (check one)

___Not at all
___A little
___Somewhat
___Quite a bit
___Drastically

8. What year did you graduate from your basic nursing program?

9. How many years have you worked in nursing since you graduated?

10. What type of program was your basic nursing program?

___Diploma
___Associate Degree

11. What is your age?

12. How many CEU's have you earned in the last year?

13. In this program, how many nursing courses have you had prior to this present one?

V. Original STAI Form X-1, A-State

SELF-EVALUATION QUESTIONNAIRE
Developed by C. C. Spielberger, R. L. Gorsuch and R. Lushene
STAI FORM X-1

NAME_____ DATE_____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	not at all	somewhat	moderately so	very much so
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I am regretful	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel rested	1	2	3	4
9. I feel anxious	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel "high strung."	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel over-excited and "rattled."	1	2	3	4
19. I feel joyful	1	2	3	4
20. I feel pleasant	1	2	3	4

VI. Modified STAI Form X-1, A-State

For the following items, use these phrases to indicate how you feel at this point in time (the last few days) about yourself and your world, particularly in relation to the effect of this course on them: [1] not at all; [2] somewhat; [3] moderately so; [4] very much so. Place the number of the appropriate phrase to the left of the number of the item.

1. I feel calm.
2. I feel secure.
3. I am tense.
4. I am regretful.
5. I feel at ease.
6. I feel upset.
7. I am presently worrying over possible misfortunes.
8. I feel rested.
9. I feel anxious.
10. I feel comfortable.
11. I feel self-confident.
12. I feel nervous.
13. I am jittery.
14. I feel "high strung."
15. I am relaxed.
16. I feel content.
17. I am worried.
18. I feel over-excited and "rattled."
19. I feel joyful.
20. I feel pleasant.

VII. Direction for Scoring STAI Form X-1, A-State

Spielberger, Gorsuch, and Lushene (1970) give the following directions for scoring the STAI Form X-1, A-State. The range of possible scores is 20-80 (p. 4). "For items on which a high rating indicates low anxiety, the scoring weights are reversed. The weighted scores of responses marked 1, 2, 3, and 4 for the reversed items are 4, 3, 2, and 1, respectively" (p. 5). There are ten such items on the STAI Form X-1, A-State scale (numbers 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20). To arrive at a score, the response values for each item are then summed. A faster method to arrive at the score is to: "Determine the sum of the weighted scores for the directly scored items on the A-State...; subtract the sum of the weighted scores for the reversed items on...[the scale]; add the appropriate constant [50] equal to five times the total number of reversed items on [the scale]..." (p. 19).

"If a subject omits one or two items...his prorated full-scale score can be obtained by the following procedure: (1) determine the mean score for the items to which the subject responded; (2) multiply this value by 20; and (3) round the product to the next higher whole number. If three or more items are omitted, however, the validity of the scale must be questioned" (p. 5).

VIII. Original Hostility Inventory

HOSTILITY INVENTORY

by Arnold H. Buss
and Ann Durkee

Use the answer sheet for recording your answers to the sixty-six statements listed below and on the next page. Decide if each of the statements is true (T) or false (F) as it pertains to you and record your response in the appropriate box on the answer sheet.

1. Unless somebody asks me in a nice way, I won't do what they want.
2. I don't seem to get what's coming to me.
3. I sometimes spread gossip about people I don't like.
4. Once in a while I cannot control my urge to harm others.
5. I know that people tend to talk about me behind my back.
6. I lose my temper easily but get over it quickly.
7. When I disapprove of my friends' behavior, I let them know it.
8. When someone makes a rule I don't like, I am tempted to break it.
9. Other people always seem to get the breaks.
10. I never get mad enough to throw things.
11. I can think of no good reason for ever hitting anyone.
12. I tend to be on my guard with people who are somewhat more friendly than I expected.
13. I am always patient with others.
14. I often find myself disagreeing with people.
15. When someone is bossy, I do the opposite of what he

asks.

16. When I look back on what's happened to me, I can't help feeling mildly resentful.

17. When I am mad, I sometimes slam doors.

18. If somebody hits me first, I let him have it.

19. There are a number of people who seem to dislike me very much.

20. I am irritated a great deal more than people are aware of.

21. I can't help getting into arguments with people when they disagree with me.

22. When people are bossy, I take my time just to show them.

23. Almost every week I see someone I dislike.

24. I never play practical jokes.

25. Whoever insults me or my family is asking for a fight.

26. There are a number of people who seem to be jealous of me.

27. It makes my blood boil to have somebody make fun of me.

28. I demand that people respect my rights.

29. Occasionally when I am mad at someone I will give him the "silent treatment."

30. Although I don't show it, I am sometimes eaten up with jealousy.

31. When I am angry, I sometimes sulk.

32. People who continually pester you are asking for a punch in the nose.

33. I sometimes have the feeling that others are laughing at me.

34. If someone doesn't treat me right, I don't let it annoy me.

35. Even when my anger is aroused, I don't use "strong language."

36. I don't know any people that I downright hate.

37. I sometimes pout when I don't get my own way.

38. I seldom strike back, even if someone hits me first.

39. My motto is "Never trust strangers."

40. Sometimes people bother me by just being around.

41. If somebody annoys me, I am apt to tell him what I think of him.

42. If I let people see the way I feel, I'd be considered a hard person to get along with.

43. Since the age of ten, I have never had a temper tantrum.

44. When I really lose my temper, I am capable of slapping someone.

45. I commonly wonder what hidden reason another person may have for doing something nice for me.

46. I often feel like a powder keg ready to explode.

47. When people yell at me, I yell back.

48. At times I feel I get a raw deal out of life.

49. I can remember being so angry that I picked up the nearest thing and broke it.

50. I get into fights about as often as the next person.

51. I used to think that most people told the truth but now I know otherwise.

52. I sometimes carry a chip on my shoulder.

53. When I get mad, I say nasty things.

54. I sometimes show my anger by banging on the table.

55. If I have to resort to physical violence to defend my rights, I will.

56. I have no enemies who really wish to harm me.

57. I can't help being a little rude to people I don't like.

58. I could not put some one in his place, even if he needed it.

59. I have known people who pushed me so far that we came to blows.

60. I seldom feel that people are trying to anger or insult me.

61. I don't let a lot of unimportant things irritate me.

62. I often make threats I don't really mean to carry out.

63. Lately, I have been kind of grouchy.

64. When arguing, I tend to raise my voice.

65. I generally cover up my poor opinion of others.

66. I would rather concede a point than get into an argument about it.

Buss, A. H., & Durkee, A. (1957). An inventory for assessing the different kinds of hostility. Journal of Consulting Psychology, 21(4), 343-349.

IX. Modified Directions for Hostility Inventory

The following items are designed to discover some of your feelings and attitudes. Read each item carefully and decide whether or not that item is true for you. There are no right or wrong answers, since different people have different attitudes and moods. Answer in terms of how you feel at this point in time (the last few days) about yourself and your world, particularly in relation to the effect of this course on them. Answer each item to the left of the number of the item as either true (T) if it applies to you, or false (F) if it does not apply to you. Don't spend too much time on any one item.

Buss, A. H., & Durkee, A. (1957). An inventory for assessing the different kinds of hostility. Journal of Consulting Psychology, 21(4), 343-349.

X. Directions for Scoring the Hostility Inventory

Compare the answers to the inventory items to those listed below. Each column represents a separate subscale of the Hostility Inventory. Mark those answers that agree with the ones listed below (use a separate scoring sheet for each subject). Then add each column separately and place the number of total agreements above the column. Then add the seven numbers above the columns for the total hostility score (Aero & Weiner, 1981, p. 64).

SCORING KEY

NE	RE	IN	AS	SU	IR	VE
1. T	2. T	3. T	4. T	5. T	6. T	7. T
8. T	9. T	10. F	11. F	12. T	13. F	14. T
15. T	16. T	17. T	18. T	19. T	20. T	21. T
22. T	23. T	24. F	25. T	26. T	27. T	28. T
29. T	30. T	31. T	32. T	33. T	34. F	35. F
	36. F	37. T	38. F	39. T	40. T	41. T
	42. T	43. F	44. T	45. T	46. T	47. T
	48. T	49. T	50. T	51. T	52. T	53. T
		54. T	55. T	56. F	57. T	58. F
			59. T	60. F	61. F	62. T
					63. T	64. T
						65. F
						66. F

NE= Negativism
RE= Resentment
IN= Indirect Hostility
AS= Assault
SU= Suspicion
IR= Irritability
VE= Verbal Hostility

XI. Original Short Multiscore Depression Inventory (Revised 8/6/83)

This is a questionnaire designed to discover some of your typical feelings and attitudes. Your task is to read each item very carefully and decide whether or not that item is true for you. There are no right or wrong answers, since different people have different attitudes and moods. We are interested in how you usually feel, about yourself and about your world. Answer each item on your answer sheet either true (T) if it usually applies to you, or false (F) if it does not usually apply to you. Remember to mark on your answer sheet and not on this test sheet.

1. My thoughts are often jumbled.
2. I often feel droopy and tired.
3. I generally feel inferior.
4. I often have a heavy conscience.
5. The fewer people around me, the better I feel.
6. My future looks rosy.
7. I don't often argue with people.
8. I frequently feel high in spirits.
9. People do not treat me fairly.
10. I usually make decisions easily.
11. I often feel sluggish and slowed down.
12. I frequently feel useless.
13. I hardly ever regret any of my actions.
14. I am a loner.
15. My future seems to get better and better.
16. I flare up when someone crosses me.
17. I am a happy person.
18. No-one ever considers how I might be feeling.

19. My thoughts keep going round in circles.
20. My energy level is usually high.
21. My opinion of myself is fairly high.
22. I have let myself down many times.
23. I usually don't mind being in crowds.
24. Things keep getting better in my life.
25. I am short tempered most of the time.
26. I usually feel pretty down.
27. I usually get adequate consideration.
28. My thought processes are crisp and precise.
29. I am usually full of pep.
30. I often feel that I am worthless.
31. I often feel bad about the things I've done.
32. I usually wish people would just leave me by myself.
33. My future, for the most part, looks pretty bright.
34. I fly off the handle easily.
35. I frequently feel blue.
36. Nobody ever seems concerned enough about me.
37. My mind is usually buzzing with confusion.
38. My vitality is usually high.
39. I never seem to do anything right.
40. I do many things that I later regret.
41. I am a sociable and outgoing person.
42. I often think negatively about the future.
43. I usually have a nasty temper.

44. I always have trouble making important decisions.
45. I usually feel lively and energetic.
46. I am sure most people find me boring.
47. I often feel guilty.

XII. Modified Directions for Short Multiscore Depression Scale

The following items are designed to discover some of your feelings and attitudes. Read each item carefully and decide whether or not that item is true for you. There are no right or wrong answers, since different people have different attitudes and moods. Answer in terms of how you feel at this point in time (the last few days) about yourself and your world, particularly in relation to the effect of this course on them. Answer each item to the left of the number of the item as either true (T) if it applies to you, or false (F) if it does not apply to you. Don't spend too much time on any one item.

XIII. Directions for Scoring the Short Multiscore Depression Inventory

Compare the subject's answers on the inventory to those listed below. Each row is a separate subscale of the Short Multiscore Depression Inventory. Mark those answers that agree with the ones listed below (use a separate scoring sheet for each subject). Then add each row separately and place the number of total agreements to the left of the subscale name. Then add the nine numbers to the left of the subscale names for the total SMDI score.

SCORING KEY

Scale	No. of Items	
Cognitive Difficulty	6	1T, 10F, 19T, 28F, 37T, 44T
Energy Level	6	2T, 11T, 20F, 29F, 38F, 45F
Self-Esteem	6	3T, 12T, 21F, 30T, 39T, 46T
Guilt	6	4T, 13F, 22T, 31T, 40T, 47T
Social Introversion	5	5T, 14T, 23F, 32T, 41F
Pessimism	5	6F, 15F, 24F, 33F, 42T
Irritability	5	7F, 16T, 25T, 34T, 43T
Sad Mood	4	8F, 17F, 26T, 35T
Instrumental Helplessness	4	9T, 18T, 27F, 36T

XIV. Multiscore Depression Inventory (Full Length)

The Multiscore Depression Inventory (MDI) is an 118-item true-false inventory which takes about 20 minutes to complete. It

> was designed to be particularly useful for studying severity of depressive symptoms with subclinical and normal populations. The MDI's subscales measure 10 important features of depression: sad mood, guilt, learned helplessness, instrumental helplessness, low energy levels, social introversion, irritability, pessimism, cognitive difficulty, and low self-esteem (Berndt, Petzel, & Kaiser, 1983).

Each subscale has 12 items, except guilt, which has 10 items.

The initial step in the development of the MDI was to decide on ten symptoms of depression to include in the inventory. This decision was made on rational grounds after reviewing the literature on depression and the present instruments used to evaluate depression (Berndt, 1983, p. 2). "Character sketches were then written which served as working definitions of the ten concepts [symptoms of depression]." "From these character sketches, in all 961 items were generated for the ten subscales by two item writers (male and female)." The number of items were then reduced to 362 by having the items rated by 20 students for ambiguity and by another 20 students for how well they matched the character descriptions from which they were written. These 362 items were then administered to 86 male and 114 female students at Loyola University of Chicago along with a measure of social desirability. Items were then excluded which were endorsed by fewer than five percent of the students (Berndt, 1983, p. 3). Then items which did not meet convergent and discriminant validity were eliminated. This decision was made if an item

> had a corrected item-total correlation less than r = .30 or if the corrected item-total score was lower than the biserial correlation with one of the nine other scales or the social desirability measure. In order to further control for the effects of socially desirable response sets, Jackson's...Differential Reliability Index was computed for the items that remained. This index indicated how much of the remaining variance in the item-total correlations was due to content

> saturation with the effect of social desirability reduced. Items within each scale were then rank-ordered on the basis of their obtained index.

By use of this rank-ordering and practical and empirical considerations, the present 118 items were selected for the MDI (Berndt, 1983, p. 4). The items are nearly balanced for acquiescent response bias (65 items were keyed so that a positive response indicated depression and 53 items were keyed negatively)" (Berndt, 1983, p. 5).

Five different samples with a total of 883 subjects, were used to determine the internal consistency reliabilities for the full scale Multiscore Depression Inventory. Three of the samples were college students at two different institutions. One of the samples was made up of high school students taking college level courses and the fifth sample was medical outpatients (N=101) at a family practice setting with an age range of 18-91. The full scale reliabilities were either .96 or .97. Most of the subscales had internal consistency reliabilities in the .80's. The Guilt subscale had reliabilities in the .70's. Learned Helplessness fluctuated between the .70's and .80's (Berndt, 1983, pp. 7, 20).

Test-retest reliability was obtained using two samples of college students (N=178). For both samples the test-retest reliability after three weeks for the full scale MDI was r = .82. The immediate test-retest for one of the samples was r = .94. The test-retest reliabilities for the subscales at three weeks were in the high .60's to .80's for both samples, except for the Instrumental Helplessness scale which was r = .38 for one sample and r = .71 for the other sample (Berndt, 1983, pp. 8, 21).

Kuder-Richardson reliabilities were mostly in the .80's for the subscales (Berndt, Petzel, & Kaiser, 1983).

Evidence for the validity of the full scale MDI was determined by having 200 college students take the MDI, Beck Depression Checklist, and Depression Adjective Checklist. The MDI correlated .69 with the Beck Depression Checklist and .77 with the Depression Adjective Checklist (Berndt, 1983, p. 8). For the subscales, "all corrected item-total biserial correlations for both initial and crossvalidation Loyola samples, were highly significant ($p < .001$), and ranged from a median of .65 on the Energy Level scale, to a median correlation of .46 for the Guilt subscale on the initial sample, with little attenuation on crossvalidation" (Berndt, 1983, p. 9).

"Face validity of the subscales initially received support from a role playing manipulation using the first Loyola sample. One hundred and forty-two students scored higher on all subscales when role playing according to the character sketches, than when taking the inventory under standard administration (all $p < .001$)" (Berndt, 1983, p. 9).

"Criterion related validity of the MDI and subscales was also provided by the family practice sample.... Ten patients with depression as a presenting complaint (9 women and one male) scored higher on all of the subscales than the other patients..." (Berndt, 1983, pp. 9, 22).

Hierarchical cluster analysis on the MDI taken by 263 college students generally supported the construct validity of the subscales. Six of the subscales formed discrete clusters, while the Pessimism subscale had a cluster of only seven items. The other three items of the Pessimism subscale formed a cluster with items from the Low Self-Esteem subscale (Berndt, 1983, p. 9). "The last cluster was a conglomeration of items mostly from the Learned Helplessness and Sad Mood subscales" (Berndt, 1983, p. 10).

> 'Factor analysis also provided evidence for construct validity of most of the subscales.' 'A principle components factor analysis [of the same results used for hierarchical cluster analysis] resulted in eight interpretable factors, rotated to varimax solution.' 'Six of the factors consisted of items from individual subscales....' 'Another factor contained items from the Energy Level and Sad Mood subscales, and the last factor included items from the Learned Helplessness and Low Self-Esteem subscales' (Berndt, 1983, p. 10).

Concurrent validity was demonstrated with a second sample of 89 college students. They took the MDI and ten other short questionnaires as criterion measures. The Guilt subscale correlated .62 with the Guilt subscale of the Buss-Durkee Hostility Inventory; the Pessimism subscale, .77 with the Beck Hopelessness Scale; the Low Self-Esteem subscale, .64 with the Low Self-Esteem subscale of the Rosenberg Scale; the Energy Level subscale, .61 with the Fatigue subscale of the Profile of Mood States; the Cognitive Difficulty subscale, .64 with the Confusion-Bewilderment subscale of the Profile of Mood States; the Sad Mood subscale, .77 with the Depressive Affect subscale of the Rosenberg Scale; the Social Introversion subscale, .48 with the Eysenck Introversion-Extroversion Scale (short form); the

Instrumental Helplessness subscale, .49 with the UCLA Loneliness Scale; the Irritability subscale, .69 with the Irritability subscale of the Buss-Durkee Hostility Inventory; and the Learned Helplessness subscale, .30 with the Situational Control Scale. All correlation were significant at $p < .001$, except Learned Helplessness which was significant at $p < .01$ (Berndt, 1983, pp. 10-11).

"The Marlowe-Crowne Social Desirability Scale...was included as a measure of discriminant validity for all the subscales." It correlated -.33 with the full scale MDI; -.34 with the Sad Mood subscale; -.38 with the Social Introversion subscale; and -.33 with the Irritability subscale. These correlations were significant at $p < .001$. The following correlation was significant at $p < .01$: -.26 with the Pessimism subscale. The correlations of -.20 with the Guilt subscale and -.22 with the Low Self-Esteem subscale were significant at $p < .05$. The following correlations were not significant: -.16 with the Learned Helplessness subscale; -.15 with the Energy Level subscale; -.15 with the Cognitive Difficulty subscale; and -.10 with the Instrumental Helplessness subscale (Berndt, 1981).

XV. Open-Ended Questions

OPEN ENDED QUESTIONS

How do you feel or what is your response/reaction, at this point in time, about going back to school and this particular course in the program? Answer in a few sentences or a short paragraph.

At this point in time how do you view the role of the nurse? What do you see as her unique role in the health care system? What do you feel is your role when you walk into a nursing situation? Answer in a few sentences or a short paragraph.

XVI. Structured Interview Questions

STRUCTURED INTERVIEW QUESTIONS

I'm interested in how have your feelings or responses/reactions to going back to school changed since you started this term.

1. How were you feeling at the start?

2. How are you feeling now?

3. Can you see any specific phases or stages that your feelings or responses/reactions have passed through since you started the fall term?

4. Did you find this course to be what you expected? (1-not at all ... 5-exactly)

5. How clear to you was your role as a RN/BSN student in the clinical area? (1-very unclear ...5-very clear)

6. How relevant was this course to your work situation? (1-irrelevant ...5-very relevant)

I'm interested in how your perspective on the role of the nurse has changed since the beginning of the term.

1. What did you see as the role of the nurse at the start?

2. What do you see as the role of the nurse now?

3. Can you see any definite evolution of your perspective on the role of the nurse over the time period during the fall term?

4. Did responding to the questionnaires over the period of time of this study have any positive effect for you? If so, what?

5. Did responding to the questionnaires have any detrimental or negative effect? If so, what?

XVII. Original Nursing Orientation Towards Care or Cure Scale

Nursing Students: This questionnaire asks for your opinion and preferences relative to nursing. All of your individual answers will be kept strictly confidential.

Please check the answer which best describes your opinion. Select only one answer for each question.

1. If you were given a choice of working on one of the following wards, which would be your first choice? ___a. Psychiatric ward ___b. Coronary care unit

2. If the choices were between the following, which would you choose? ___a. Emergency room (as a triage nurse) ___b. Diabetic clinic (as a patient teacher-counselor)

3. Would you prefer to work as: ___a. An operating room nurse ___b. A public health nurse

4. If you were a pediatric nurse practitioner, would you rather concentrate your time on: ___a. Diagnosing and treating children in the walk-in clinic ___b. Well child supervision and parent education

5. If you had the opportunity to choose between two summer jobs, which would you prefer to be: ___a. A mobile intensive care nurse ___b. A counselor for unwed mothers in a planned parenthood clinic

6. If you were working in an OB unit, which would you choose as your first experience: ___a. Setting up a fetal monitoring system ___b. Teaching a mother how to feed her infant

7. Would you rather: ___a. Give medications for the entire team ___b. Try to reorient a confused patient

8. After a man had died, his wife was very hysterical. What would you tend to do: ___a. Obtain medication for her to calm her down ___b. Help her to work through the grieving process

9. Would you rather: ___a. Teach a patient self-injection of heparin ___b. Be in charge of I.V. administration and maintenance for several patients

10. Would you rather work with a patient who: ___a. Is having an emotional response to major surgery ___b. Needs dressing changes every 4 hours

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XVIII. Modified Instructions for Nursing Orientation Towards Care or Cure Scale

The following questions ask for your opinion and preferences relative to nursing. Please check the answer which best describes your opinion at this point in time (the last few days). There are no right or preferred answers.

XIX. Directions for Scoring The Nursing Orientation Towards Care or Cure Scale

For each forced-choice item, if the subject chooses the cure oriented option, assign one point. If the subject chooses the care oriented option, assign two points. Total the points for the ten items. The range of points is 10-20. If the subject's score if above 15, he is care oriented; if his score is below 15, he is cure oriented.

SCORING KEY

1. A. care
   B. cure

2. A. cure
   B. care

3. A. cure
   B. care

4. A. cure
   B. care

5. A. cure
   B. care

6. A. cure
   B. care

7. A. cure
   B. care

8. A. cure
   B. care

9. A. care
   B. cure

10. A. care
    B. cure

XX. Original Opinions About Nursing Scale

QUESTIONNAIRE ON OPINIONS ABOUT NURSING

We are now interested in having your opinions about nursing. This questionnaire consists of twenty-two hypothetical situations that might possibly occur in nursing. Each situation is followed by a statement. YOU ARE ASKED TO INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THAT STATEMENT.

Consider the situation in relation to the entire nursing profession. Give your opinions. There are no right answers. Consider all questions in relation to your own reactions.

For example, an illustration of a situation would be: " Some nurses believe that doctors are more professional than nurses."

The statement following the situation would be: "This is what nurses should believe."

You would be asked to indicate the DEGREE to which you agree or disagree with this statement by placing a circle around the symbol under one of the alternative answers.

SD (STRONGLY DISAGREE) indicates that you disagree with the statement with almost no exceptions.

D (DISAGREE) indicates that you disagree with the statement with some exceptions.

U (UNDECIDED) indicates that you could agree or disagree with the statement with about an equal number of exceptions in either case.

A (AGREE) indicates that you agree with the statement with some exceptions.

SA (STRONGLY AGREE) indicates that you agree with the statement with almost no exceptions.

Please be sure to circle the appropriate symbol after each statement.

1. Some nurses believe that they can get along very well without a great deal of formal education, such as is required for a bachelor's or master's degree.

This is what nurses <u>should</u> believe. SD D U A SA

2. One nurse, who is an otherwise excellent nurse except that she is frequently late for work, is not being considered for promotion, even though she seems to get the important work done.

This is the way it <u>should</u> be in nursing. SD D U A SA

3. Some nurses believe that the nurses who should be rewarded most highly are the ones who regard nursing as a calling in which one's religious beliefs can be put into practice.

This is what nurses <u>should</u> believe. SD D U A SA

4. A nurse is influenced mainly by the opinions of hospital authorities and doctors when she considers what truly "good" nursing is.

This is what nurses <u>should</u> consider in forming their opinions. SD D U A SA

5. A nurse believes that a patient ought to be referred to a public health nurse and tries to convince the doctor of this, even though the doctor is doubtful.

This is the way nurses <u>should</u> act. SD D U A SA

6. All of the nurses at one hospital are active members of professional nursing associations, attending most of the conferences and meetings of the associations.

This <u>should</u> be true of all nurses. SD D U A SA

7. Some nurses try to live up to what they think are the standards of their profession, even if other nurses on the unit or supervisors do not seem to like it.

This is the way nurses <u>should</u> act. SD D U A SA

8. At one hospital nurses spend more time at bedside nursing than at any other nursing task.

This is the way it <u>should</u> be in nursing. SD D U A SA

9. One nurse tries to put her standards and ideals about good nursing into practice even if hospital rules and procedures prohibit it.

This is the way nurses should act. SD D U A SA

10. At one hospital the nurse's ability to understand the psychological and social factors in the patient's background is regarded as more important than her knowledge of other nursing skills, such as how to administer an enema or an intravenous infusion or how to chart accurately.

This is the way it should be in nursing. SD D U A SA

11. A doctor orders a patient to sit up in a wheel chair twice a day, but a nurse believes that the patient is not emotionally ready to sit up. The doctor respects her opinion and changes the order.

This is the way it should be in nursing. SD D U A SA

12. Some hospitals try to hire only nurses who received their nursing education in colleges and universities that include basic theoretical knowledge of nursing science as a part of the curriculum.

This is the way it should be in nursing. SD D U A SA

13. Head nurses and doctors at one hospital allow the nurse to tell the patient as much about his physical and emotional condition as the nurse thinks is best for the patient.

This is the way it should be in nursing. SD D U A SA

14. When a supervisor at one hospital considers a nurse for promotion, one of the most important factors is the length of experience on the job.

This is what supervisors should regard as important. SD D U A SA

15. At some hospitals when a nurse is considered for promotion, one of the most important factors considered by the supervisor is the nurse's knowledge of , and ability to use, judgment about nursing care.

This is what supervisors should regard as important. SD D U A SA

16. A staff nurse observes another staff nurse, licensed practical nurse. or aide who has worked in the hospital for months, violating a very important hospital rule or policy and mentions it to the head nurse or supervisor.

This is the way nurses should act. SD D U A SA

17. Doctors and head nurses at one hospital respect and reward nurses who spend time talking with patients in an attempt to understand the hostilities, fears, and doubts which may affect recovery.

This is what doctors and head nurses should regard as important. SD D U A SA

18. All of the nurses at one hospital spend, on the average, at least six hours a week reading professional journals and attending programs or courses in continuing professional education.

This should be true of all nurses. SD D U A SA

19. In talking to acquaintances who are not in nursing, a nurse gives her opinions about things she disagrees with in her hospital.

This is the way nurses should act. SD D U A SA

20. One nurse does not do anything which she is told to do unless she is satisfied that it is best for the welfare of the patient.

This is the way nurses should act. SD D U A SA

21. A head nurse at one hospital insists that the rules be followed in detail at all times, even if some of them do seem impractical.

This is the way head nurses and supervisors should act. SD D U A SA

22. At some hospitals the nurses who are most successful are the ones who are realistic and practical about their jobs, rather than the ones who attempt to live according to idealistic principles about serving humanity.

This is the way it should be in nursing. SD D U A SA

Lucille Notter and Marguerite Robey, "Questionnaire on Opinions about Nursing, The Open Curriculum in Nursing Education: Final Report (New York: National League for Nursing, 1979), pp. 447-450. Used with permission.

XXI. Modified Directions for Opinions About Nursing Scale

The following questions consist of 22 hypothetical situations that might possible occur in nursing. Each situation is followed by a statement. YOU ARE ASKED TO INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THAT STATEMENT.

Consider the situation in relation to the entire nursing profession. Give your opinions at this point in time (the last few days). There are no right answers. Consider all questions in relation to your own reactions. Don't spent too much time on any one situation.

XXII. Instructions for Scoring the Opinions About Nursing Scale

"The arithmetic sum of responses to items in each scale constitutes the total scale score for each of the role conceptions of each respondent" (Corwin, 1961a). The response of SA=5, A=4, U=3, D=2, SD=1. For items on which a SA indicates a low value of the role conception, the scoring weights are reversed. For these items SA=1, A=2, U=3, D=4, SD=5. There is one such item in each subscale (numbers 1, 19, and 22). The numbers of the items belonging to each subscale are listed below. Add the values for each item in each subscale separately for that subscale's total score.

SCORING KEY

Bureaucratic	Service	Professional
2	3	1(reverse scoring)
4	5	6
14	8	7
16	10	9
19(reverse scoring)	11	12
21	13	15
	17	18
	22(reverse scoring)	20

APPENDIX E

FIRST QUESTIONNAIRE

Code No. ___-____-__-__-__

OPEN ENDED QUESTIONS

How do you feel or what is your response/reaction, at this point in time, about going back to school and this particular course in the program? Answer in a few sentences or a short paragraph.

At this point in time how do you view the role of the nurse? What do you see as her unique role in the health care system? What do you feel is your role when you walk into a nursing situation? Answer in a few sentences or a short paragraph.

Code No. ___-____-__-__-__

The following items are designed to discover some of your feelings and attitudes. Read each item carefully and decide whether or not that item is true for you. There are no right or wrong answers, since different people have different attitudes and moods. Answer in terms of how you feel at this point in time (the last few days) about yourself and your world, particularly in relation to the effect of this course on them. Answer each item to the left of the number of the item as either true (T) if it applies to you, or false (F) if it does not apply to you. Don't spend too much time on any one item.

1. My thoughts are often jumbled.
2. I often feel droopy and tired.
3. I generally feel inferior.
4. I often have a heavy conscience.
5. The fewer people around me, the better I feel.
6. My future looks rosy.
7. I don't often argue with people.
8. I frequently feel high in spirits.
9. People do not treat me fairly.
10. I usually make decisions easily.
11. I often feel sluggish and slowed down.
12. I frequently feel useless.
13. I hardly ever regret any of my actions.
14. I am a loner.
15. My future seems to get better and better.
16. I flare up when someone crosses me.
17. I am a happy person.
18. No-one ever considers how I might be feeling.

19. My thoughts keep going round in circles.
20. My energy level is usually high.
21. My opinion of myself is fairly high.
22. I have let myself down many times.
23. I usually don't mind being in crowds.
24. Things keep getting better in my life.
25. I am short tempered most of the time.
26. I usually feel pretty down.
27. I usually get adequate consideration.
28. My thought processes are crisp and precise.
29. I am usually full of pep.
30. I often feel that I am worthless.
31. I often feel bad about the things I've done.
32. I usually wish people would just leave me by myself.
33. My future, for the most part, looks pretty bright.
34. I fly off the handle easily.
35. I frequently feel blue.
36. Nobody ever seems concerned enough about me.
37. My mind is usually buzzing with confusion.
38. My vitality is usually high.
39. I never seem to do anything right.
40. I do many things that I later regret.
41. I am a sociable and outgoing person.
42. I often think negatively about the future.
43. I usually have a nasty temper.
44. I always have trouble making important decisions.

45. I usually feel lively and energetic.

46. I am sure most people find me boring.

47. I often feel guilty.

48. Unless somebody asks me in a nice way, I won't do what they want.

49. I don't seem to get what's coming to me.

50. I sometimes spread gossip about people I don't like.

51. Once in a while I cannot control my urge to harm others.

52. I know that people tend to talk about me behind my back.

53. I lose my temper easily but get over it quickly.

54. When I disapprove of my friends' behavior, I let them know it.

55. When someone makes a rule I don't like, I am tempted to break it.

56. Other people always seem to get the breaks.

57. I never get mad enough to throw things.

58. I can think of no good reason for ever hitting anyone.

59. I tend to be on my guard with people who are somewhat more friendly than I expected.

60. I am always patient with others.

61. I often find myself disagreeing with people.

62. When someone is bossy, I do the opposite of what he asks.

63. When I look back on what's happened to me, I can't help feeling mildly resentful.

64. When I am mad, I sometimes slam doors.

65. If somebody hits me first, I let him have it.

66. There are a number of people who seem to dislike me very much.

67. I am irritated a great deal more than people are aware of.

68. I can't help getting into arguments with people when they disagree with me.

69. When people are bossy, I take my time just to show them.

70. Almost every week I see someone I dislike.

71. I never play practical jokes.

72. Whoever insults me or my family is asking for a fight.

73. There are a number of people who seem to be jealous of me.

74. It makes my blood boil to have somebody make fun of me.

75. I demand that people respect my rights.

76. Occasionally when I am mad at someone I will give him the "silent treatment."

77. Although I don't show it, I am sometimes eaten up with jealousy.

78. When I am angry, I sometimes sulk.

79. People who continually pester you are asking for a punch in the nose.

80. I sometimes have the feeling that others are laughing at me.

81. If someone doesn't treat me right, I don't let it annoy me.

82. Even when my anger is aroused, I don't use "strong language."

83. I don't know any people that I downright hate.

84. I sometimes pout when I don't get my own way.

85. I seldom strike back, even if someone hits me first.

86. My motto is "Never trust strangers."

87. Sometimes people bother me by just being around.

88. If somebody annoys me, I am apt to tell him what I think of him.

89. If I let people see the way I feel, I'd be considered a hard person to get along with.

90. Since the age of ten, I have never had a temper tantrum.

91. When I really lose my temper, I am capable of slapping someone.

92. I commonly wonder what hidden reason another person may have for doing something nice for me.

93. I often feel like a powder keg ready to explode.

94. When people yell at me, I yell back.

95. At times I feel I get a raw deal out of life.

96. I can remember being so angry that I picked up the nearest thing and broke it.

97. I get into fights about as often as the next person.

98. I used to think that most people told the truth but now I know otherwise.

99. I sometimes carry a chip on my shoulder.

100. When I get mad, I say nasty things.

101. I sometimes show my anger by banging on the table.

102. If I have to resort to physical violence to defend my rights, I will.

103. I have no enemies who really wish to harm me.

104. I can't help being a little rude to people I don't like.

105. I could not put some one in his place, even if he needed it.

106. I have known people who pushed me so far that we came to blows.

107. I seldom feel that people are trying to anger or insult me.

108. I don't let a lot of unimportant things irritate me.

109. I often make threats I don't really mean to carry out.

110. Lately, I have been kind of grouchy.

111. When arguing, I tend to raise my voice.

112. I generally cover up my poor opinion of others.

113. I would rather concede a point than get into an argument about it.

For the following items, use these phrases to indicate how you feel at this point in time (the last few days) about yourself and your world, particularly in relation to the effect of this course on them: [1] not at all; [2] somewhat; [3] moderately so; [4] very much so. Place the number of the appropriate phrase to the left of the number of the item.

1. I feel calm.

2. I feel secure.

3. I am tense.

4. I am regretful.

5. I feel at ease.

6. I feel upset.

7. I am presently worrying over possible misfortunes.

8. I feel rested.

9. I feel anxious.
10. I feel comfortable.
11. I feel self-confident.
12. I feel nervous.
13. I am jittery.
14. I feel "high strung."
15. I am relaxed.
16. I feel content.
17. I am worried.
18. I feel over-excited and "rattled."
19. I feel joyful.
20. I feel pleasant.

The following questions ask for your opinion and preferences relative to nursing. Please check the answer which best describes your opinion at this point in time (the last few days). There are no right or preferred answers.

1. If you were given a choice of working on one of the following wards, which would be your first choice? ___a. Psychiatric ward ___b. Coronary care unit

2. If the choices were between the following, which would you choose? ___a. Emergency room (as a triage nurse) ___b. Diabetic clinic (as a patient teacher-counselor)

3. Would you prefer to work as: ___a. An operating room nurse ___b. A public health nurse

4. If you were a pediatric nurse practitioner, would you rather concentrate your time on: ___a. Diagnosing and treating children in the walk-in clinic ___b. Well child supervision and parent education

5. If you had the opportunity to choose between two summer jobs, which would you prefer to be: ___a. A mobile intensive care nurse ___b. A counselor for unwed mothers in a planned parenthood clinic

6. If you were working in an OB unit, which would you choose as your first experience: ___a. Setting up a fetal monitoring system ___b. Teaching a mother how to feed her infant

7. Would you rather: ___a. Give medications for the entire team ___b. Try to reorient a confused patient

8. After a man had died, his wife was very hysterical. What would you tend to do: ___a. Obtain medication for her to calm her down ___b. Help her to work through the grieving process

9. Would you rather: ___a. Teach a patient self-injection of heparin ___b. Be in charge of I.V. administration and maintenance for several patients

10. Would you rather work with a patient who: ___a. Is having an emotional response to major surgery ___b. Needs dressing changes every 4 hours

The following questions consist of 22 hypothetical situations that might possibly occur in nursing. Each situation is followed by a statement. YOU ARE ASKED TO INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THAT STATEMENT. Consider the situation in relation to the entire nursing profession. Give your opinions at this point in time (the last few days). There are no right answers. Consider all questions in relation to your own reactions. Don't spent too much time on any one situation.

For example, an illustration of a situation would be: " Some nurses believe that doctors are more professional than nurses."

The statement following the situation would be: "This is what nurses should believe."

You would be asked to indicate the DEGREE to which you agree or disagree with this statement by placing a circle around the symbol under one of the alternative answers.

SD (STRONGLY DISAGREE) indicates that you disagree with the statement with almost no exceptions.

D (DISAGREE) indicates that you disagree with the statement with some exceptions.

U (UNDECIDED) indicates that you could agree or disagree with the statement with about an equal number of exceptions in either case.

A (AGREE) indicates that you agree with the statement with some exceptions.

SA (STRONGLY AGREE) indicates that you agree with the statement with almost no exceptions.

Please be sure to circle the appropriate symbol after each statement.

1. Some nurses believe that they can get along very well without a great deal of formal education, such as is required for a bachelor's or master's degree.

This is what nurses should believe. SD D U A SA

2. One nurse, who is an otherwise excellent nurse except that she is frequently late for work, is not being considered for promotion, even though she seems to get the important work done.

This is the way it should be in nursing. SD D U A SA

3. Some nurses believe that the nurses who should be rewarded most highly are the ones who regard nursing as a calling in which one's religious beliefs can be put into practice.

This is what nurses should believe. SD D U A SA

4. A nurse is influenced mainly by the opinions of hospital authorities and doctors when she considers what truly "good" nursing is.

This is what nurses should consider in forming their opinions. SD D U A SA

5. A nurse believes that a patient ought to be referred to a public health nurse and tries to convince the doctor of this, even though the doctor is doubtful.

This is the way nurses should act. SD D U A SA

6. All of the nurses at one hospital are active members of professional nursing associations, attending most of the conferences and meetings of the associations.

This should be true of all nurses. SD D U A SA

7. Some nurses try to live up to what they think are the standards of their profession, even if other nurses on the unit or supervisors do not seem to like it.

This is the way nurses should act. SD D U A SA

8. At one hospital nurses spend more time at bedside nursing than at any other nursing task.

This is the way it should be in nursing. SD D U A SA

9. One nurse tries to put her standards and ideals about good nursing into practice even if hospital rules and procedures prohibit it.

This is the way nurses should act. SD D U A SA

10. At one hospital the nurse's ability to understand the psychological and social factors in the patient's background is regarded as more important than her knowledge of other nursing skills, such as how to administer an enema or an intravenous infusion or how to chart accurately.

This is the way it should be in nursing. SD D U A SA

11. A doctor orders a patient to sit up in a wheel chair twice a day, but a nurse believes that the patient is not emotionally ready to sit up. The doctor respects her opinion and changes the order.

This is the way it should be in nursing. SD D U A SA

12. Some hospitals try to hire only nurses who received their nursing education in colleges and universities that include basic theoretical knowledge of nursing science as a part of the curriculum.

This is the way it should be in nursing. SD D U A SA

13. Head nurses and doctors at one hospital allow the nurse to tell the patient as much about his physical and emotional condition as the nurse thinks is best for the patient.

This is the way it should be in nursing. SD D U A SA

14. When a supervisor at one hospital considers a nurse for promotion, one of the most important factors is the length of experience on the job.

This is what supervisors should regard as important. SD D U A SA

15. At some hospitals when a nurse is considered for promotion, one of the most important factors considered by the supervisor is the nurse's knowledge of, and ability to use, judgment about nursing care.

This is what supervisors should regard as important. SD D U A SA

16. A staff nurse observes another staff nurse, licensed practical nurse. or aide who has worked in the hospital for months, violating a very important hospital rule or policy and mentions it to the head nurse or supervisor.

This is the way nurses should act. SD D U A SA

17. Doctors and head nurses at one hospital respect and reward nurses who spend time talking with patients in an attempt to understand the hostilities, fears, and doubts which may affect recovery.

This is what doctors and head nurses should regard as important. SD D U A SA

18. All of the nurses at one hospital spend, on the average, at least six hours a week reading professional journals and attending programs or courses in continuing professional education.

This should be true of all nurses. SD D U A SA

19. In talking to acquaintances who are not in nursing, a nurse gives her opinions about things she disagrees with in her hospital.

This is the way nurses should act. SD D U A SA

20. One nurse does not do anything which she is told to do unless she is satisfied that it is best for the welfare of the patient.

This is the way nurses should act. SD D U A SA

21. A head nurse at one hospital insists that the rules be followed in detail at all times, even if some of them do seem impractical.

This is the way head nurses and supervisors should act. SD D U A SA

22. At some hospitals the nurses who are most successful are the ones who are realistic and practical about their jobs, rather than the ones who attempt to live according to idealistic principles about serving humanity.

This is the way it should be in nursing. SD D U A SA

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

Date completed_____

APPENDIX F

INTRODUCTORY LETTERS FOR QUESTIONNAIRES

I. Introductory Letter for First Questionnaire

Dear RN Student,

Thank you for consenting to participate in my research project. Your participation is invaluable to me, especially your continuation in the project throughout the term.

Enclosed is your first set of questions. It is not necessary that you complete the whole set at one time but please complete them within three days and return them to me in the enclosed stamped, self-addressed envelope.

The validity of my research is based on the assumption that you will answer the questions as you really feel at this point in time. Don't try to answer them as you think you should but just as you honestly and really feel. Research results are only as good as the observations are, as things really exist in the phenomena being observed (in this case, your feelings and opinions).

Remember to return the questions to me in at least three days.

Thank you,

Edith Hogle

II. Introductory Letter for Second Questionnaire

Dear RN Student,

I anxiously open my mailbox each day to see if there are returned questionnaires there. Thanks so much for returning your set of questions!

Your second set of questions is enclosed. As you respond to the items, don't think about or try to remember how you answered the items on the first set of questions. I'm not interested in consistency but how you feel and think at this point in time in the term. Remember, the validity of my research is based on the assumption that you will answer the questions as you really feel at this point in time. Don't try to answer them as you think you should but just as you honestly and really feel. Research results are only as good as the observations are, as things really exist in the phenomena being observed (in this case, your feelings and opinions).

Again, It is not necessary that you complete the whole set at one time but please complete them within three days and return them to me in the enclosed stamped, self-addressed envelope.

Thank you for continuing to participate in my research project. Your participation is invaluable to me, especially your continuation in the project throughout the term.

Thank you,

Edith Hogle

III. Introductory Letter for Third Questionnaire

Dear RN Student,

I really appreciate your sticking with your agreement to help me with my research project. We are on the downhill side now! The enclosed set of questions is the next to last set.

As you set about to answer this set of questions, I would again remind you not to think about how you answered these questions on previous occasions. I am interested only in how you feel at this particular point in time.

Again, let me assure you that what I need is your honest, open answers to these questions. The finding of my research will be of no value to me or future R N Students if your responses are not of a valid nature (your real, true feelings).

Thank you,

Edith Hogle

IV. Introductory Letter for Fourth Questionnaire

Dear R N Student,

Enclosed is your last set of questions! I really appreciate your sticking with my project and giving me your time in answering the sets of questions.

You will recall that you also agreed to be interviewed at the end of this term. When you return this last set of questions, I will phone you for a short telephone interview. At the end of this set of questions I have asked you to indicate a time that would be convenient for you.

As you respond to this last set of questions don't think about or try to remember how you answered the items on previous sets of questions. I'm not interested in consistency but how you feel and think at this point in time in the term. Remember, the validity of my research is based on the assumption that you will answer the questions as you really feel at this point in time. Don't try to answer them as you think you should but just as you honestly and really feel. Research results are only as good as the observations are, as things really exist in the phenomena being observed (in this case, your feelings and opinions).

Again, It is not necessary that you complete the whole set at one time but please complete them within three days and return them to me in the enclosed stamped, self-addressed envelope.

Thank you for continuing to participate in my research project. Your participation is invaluable to me, especially your continuation in the project to its completion.

Thank you,

Edith Hogle

APPENDIX G

REMINDER LETTERS FOR QUESTIONNAIRES NOT RETURNED

I. Reminder Letter for Unreturned First Questionnaire

Dear R N Student,

Just a reminder that I haven't received your responses to the first set of questions. Since you signed the consent form and filled out the demographic data sheet, I felt that you intended to participate in my research.

Please finish responding to the first set of questions I sent you and drop them in the mail in the self addressed, stamped envelope provided. I really need your participation!

Thanks,

Edith Hogle

II. Reminder Letter for Unreturned Second Questionnaire

Dear R N Student,

Just a reminder that I haven't received your responses to the second set of questions. Since you responded to the first set of questions, I felt that you intended to stay with the project to its completion.

Please finish responding to the second set of questions I sent you and drop them in the mail in the self addressed, stamped envelope provided. I really need your continued participation!

Thanks,

Edith Hogle

III. Reminder Letter for Unreturned Third Questionnaire

Dear R N Student,

Just a reminder that I haven't received your responses to the last set of questions that I sent to you. Since you responded to the first set of questions, I felt that you intended to stay with the project to its completion.

Please finish responding to the last set of questions I sent you and drop them in the mail in the self addressed, stamped envelope provided. I really need your continued participation!

Thanks,

Edith Hogle

IV. Reminder Letter for Unreturned Fourth Questionnaire

Dear R N Student,

Just a reminder that I haven't received your responses to the last set of questions that I sent to you. Since you responded to the first set of questions, I felt that you intended to stay with the project to its completion.

Please finish responding to the last set of questions I sent you and drop them in the mail in the self addressed, stamped envelope provided. I really need your continued participation, especially since this is the last set of questions!

Thanks,

Edith Hogle

APPENDIX H

ADDENDUM TO RESULTS

I. Means and Standard Deviations on the Role Strain Variables at Four Points in Time for the Two Groups

Role Strain Variable	Group 1(n=34) Mean	Group 1(n=34) S D	Group 2(n=31) Mean	Group 2(n=31) S D
STAI Form X-1				
T(1)	44.29	12.59	42.29	12.46
T(2)	44.44	13.03	39.48	12.46
T(3)	44.94	11.93	42.55	15.13
T(4)	38.00	11.41	35.90	11.38
Hostility Inventory				
T(1)	22.97	10.40	21.10	9.30
T(2)	22.79	11.10	19.94	9.60
T(3)	23.85	10.53	24.32	10.14
T(4)	21.65	11.43	22.45	10.63
Short Multi-Score Depression Inventory				
T(1)	8.47	8.14	9.55	6.91
T(2)	8.24	8.19	8.35	6.89
T(3)	10.50	9.40	11.77	11.16
T(4)	8.15	9.13	8.65	8.80

Group 1 RN students taking nursing courses
Group 2 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

II. Means and Standard Deviations on the Role Strain Variables at Four Points in Time for the Three Groups

Role Strain Variable	Group 1(n=14) Mean	Group 1(n=14) S D	Group 2(n=20) Mean	Group 2(n=20) S D	Group 3(n=31) Mean	Group 3(n=31) S D
STAI Form X-1						
T(1)	48.14	12.13	41.60	12.49	42.29	12.46
T(2)	47.29	13.29	42.45	12.80	39.48	12.46
T(3)	44.00	8.95	45.60	13.84	42.55	15.13
T(4)	41.50	14.27	35.55	8.45	35.00	11.38
Hostility Inventory						
T(1)	23.29	10.50	22.75	10.59	21.10	9.30
T(2)	23.14	10.02	22.55	12.04	19.94	9.60
T(3)	24.64	11.34	23.30	10.20	24.32	10.14
T(4)	23.50	11.80	20.35	11.28	22.45	10.63
Short Multi-Score Depression Inventory						
T(1)	8.29	6.22	8.60	9.41	9.55	6.91
T(2)	9.29	8.28	7.50	8.26	8.35	6.89
T(3)	9.79	8.52	11.00	10.16	11.77	11.16
T(4)	8.71	7.84	7.75	10.12	8.65	8.80

Group 1 RN students taking first theoretical nursing courses
Group 2 RN students taking first nursing courses with clinical component
Group 3 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

III. Means and Standard Deviations on the Role Strain Variables at Four Points in Time for the Four Groups

Role Strain Variable	Group 1(n=18) Mean	Group 1(n=18) S D	Group 2(n=9) Mean	Group 2(n=9) S D
STAI Form X-1				
T(1)	46.17	11.98	42.78	12.26
T(2)	43.06	12.90	43.56	11.18
T(3)	43.28	9.02	48.78	14.93
T(4)	40.50	12.35	31.33	9.25
Hostility Inventory				
T(1)	22.17	9.17	22.22	12.10
T(2)	21.72	7.71	20.11	12.02
T(3)	23.00	9.31	22.22	10.71
T(4)	22.83	9.68	15.44	11.81
Short Multi-Score Depression Inventory				
T(1)	7.94	7.09	7.44	6.27
T(2)	7.33	7.76	6.89	4.43
T(3)	8.83	8.92	12.67	9.54
T(4)	8.22	7.62	2.78	4.02

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

III. Means and Standard Deviations on the Role Strain Variables at Four Points in Time for the Four Groups (continued)

Role Strain Variable	Group 3 (n=7) Mean	Group 3 (n=7) S D	Group 4 (n=31) Mean	Group 4 (n=31) S D
STAI Form X-1				
T(1)	41.43	15.53	42.29	12.46
T(2)	49.14	16.20	39.48	12.46
T(3)	44.29	14.99	42.55	15.13
T(4)	40.14	8.86	35.90	11.38
Hostility Inventory				
T(1)	26.00	12.14	21.10	9.30
T(2)	29.00	16.04	19.94	9.60
T(3)	28.14	13.58	24.32	10.14
T(4)	26.57	13.26	22.45	10.63
Short Multi-Score Depression Inventory				
T(1)	11.14	12.58	9.55	6.91
T(2)	12.29	12.16	8.35	6.89
T(3)	12.00	11.03	11.77	11.16
T(4)	14.86	13.30	8.65	8.80

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

IV. Means and Standard Deviations on the Nursing Role Perspective Variables at Four Points in Time for the Two Groups

Nursing Role Perspective Variable	Group 1(n=33) Mean	Group 1(n=33) S D	Group 2(n=31) Mean	Group 2(n=31) S D
Care/Cure				
T(1)	16.03	2.79	16.10	2.40
T(2)	16.00	2.54	16.29	2.25
T(3)	16.24	2.56	16.42	2.49
T(4)	16.55	2.63	16.74	2.46
Bureaucratic				
T(1)	16.73	3.16	17.74	2.98
T(2)	16.94	2.78	18.13	2.97
T(3)	17.21	2.62	17.97	2.81
T(4)	17.24	2.67	17.84	2.40
Service				
T(1)	26.64	3.14	27.19	2.86
T(2)	26.97	2.69	26.58	3.46
T(3)	27.39	2.51	27.32	2.63
T(4)	27.52	3.05	27.32	3.16
Professional				
T(1)	29.61	3.47	28.84	3.72
T(2)	29.39	3.82	28.13	3.69
T(3)	29.94	4.47	28.00	3.65
T(4)	29.79	3.81	28.13	3.35

Group 1 RN students taking nursing courses
Group 2 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

V. Means and Standard Deviations on the Nursing Role Perspective Variables at Four Points in Time for the Three Groups

Nursing Role Perspective Variable	Group 1(n=14) Mean	Group 1(n=14) S D	Group 2(n=19) Mean	Group 2(n=19) S D	Group 3(n=31) Mean	Group 3(n=31) S D
Care/Cure						
T(1)	17.00	2.60	15.32	2.77	16.10	2.40
T(2)	16.36	2.27	15.74	2.75	16.29	2.25
T(3)	16.71	2.30	15.89	2.75	16.42	2.49
T(4)	17.57	2.10	15.79	2.78	16.74	2.46
Bureaucratic						
T(1)	16.71	3.07	16.74	3.31	17.74	2.98
T(2)	16.07	2.64	17.58	2.78	18.13	2.97
T(3)	17.14	2.85	17.26	2.51	17.97	2.81
T(4)	16.79	2.78	17.63	2.61	17.84	2.40
Service						
T(1)	26.21	3.49	26.95	2.91	27.19	2.86
T(2)	26.57	2.28	27.26	2.98	26.58	3.46
T(3)	27.14	2.60	27.58	2.50	27.32	2.63
T(4)	27.36	1.98	27.63	3.70	27.32	3.16
Professional						
T(1)	29.50	4.72	29.68	2.31	28.84	3.72
T(2)	29.71	4.29	29.16	3.55	28.13	3.69
T(3)	30.14	4.49	29.79	4.58	28.00	3.65
T(4)	30.43	4.11	29.32	3.61	28.13	3.35

Group 1 RN students taking first theoretical nursing courses
Group 2 RN students taking first nursing courses with clinical component
Group 3 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

VI. Means and Standard Deviations on the Nursing Role Perspective Variables at Four Points in Time for the Four Groups

Nursing Role Perspective Variable	Group 1(n=18) Mean	Group 1(n=18) S D	Group 2(n=8) Mean	Group 2(n=8) S D
Care/Cure				
T(1)	16.17	2.77	16.13	2.80
T(2)	15.83	2.36	16.13	2.70
T(3)	16.17	2.41	16.13	2.42
T(4)	16.78	2.51	16.25	2.92
Bureaucratic				
T(1)	17.11	2.89	17.63	2.97
T(2)	16.94	2.75	16.50	2.93
T(3)	17.06	2.65	18.00	2.73
T(4)	16.94	2.71	18.25	3.15
Service				
T(1)	26.67	3.66	26.50	2.51
T(2)	26.83	3.05	26.13	1.81
T(3)	26.94	2.86	28.00	1.60
T(4)	27.33	3.34	28.25	3.01
Professional				
T(1)	29.78	4.24	29.38	2.88
T(2)	29.78	3.87	27.88	3.00
T(3)	29.94	4.52	28.75	4.68
T(4)	29.78	3.83	29.50	3.74

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

VI. Means and Standard Deviations on the Nursing Role Perspective Variables at Four Points in Time for the Four Groups(continued)

Nursing Role Perspective Variable	Group 3(n=7) Mean	Group 3(n=7) S D	Group 4(n=31) Mean	Group 4(n=31) S D
Care/Cure				
T(1)	15.57	3.21	16.10	2.40
T(2)	16.29	3.15	16.29	2.25
T(3)	16.57	3.41	16.42	2.49
T(4)	16.29	2.98	16.74	2.46
Bureaucratic				
T(1)	14.71	3.64	17.74	2.98
T(2)	17.43	3.05	18.13	2.97
T(3)	16.71	2.63	17.97	2.81
T(4)	17.00	2.00	17.84	2.40
Service				
T(1)	26.71	2.69	27.19	2.86
T(2)	28.29	2.29	26.58	3.46
T(3)	27.86	2.48	27.32	2.63
T(4)	27.14	2.54	27.32	3.16
Professional				
T(1)	29.43	1.90	28.84	3.72
T(2)	30.14	4.56	28.13	3.69
T(3)	31.29	4.39	28.00	3.65
T(4)	30.14	4.38	28.13	3.35

Group 1 RN students taking first nursing course
Group 2 RN students taking second or third nursing course
Group 3 RN students taking fourth nursing course
Group 4 RN students taking non-nursing courses
T(1) First week of term
T(2) 1/3 through term
T(3) 2/3 through term
T(4) Last week of term

APPROVAL SHEET

The dissertation submitted by Edith L. Hogle has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy .

December 1, 1986
Date

Director's Signature